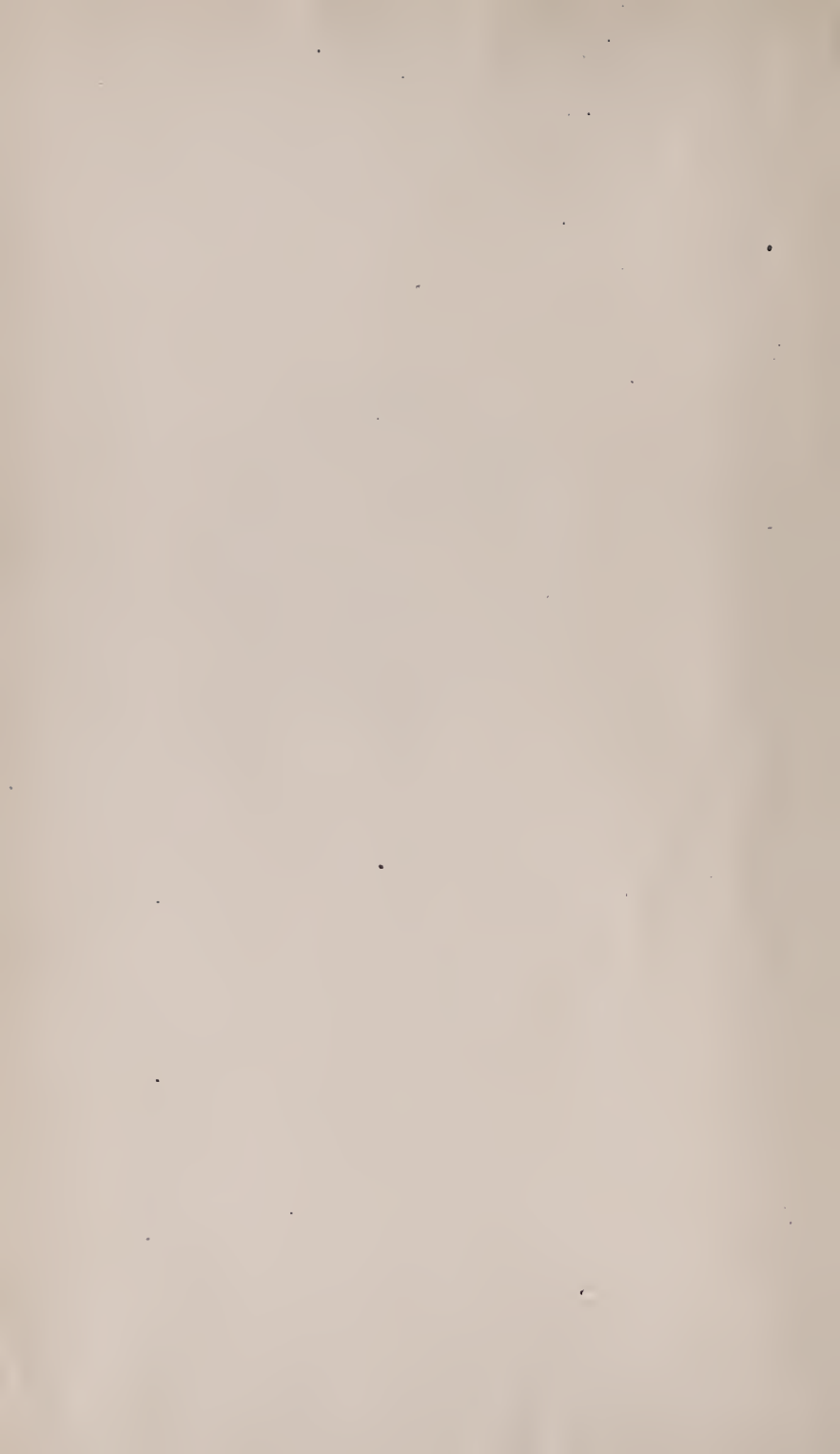


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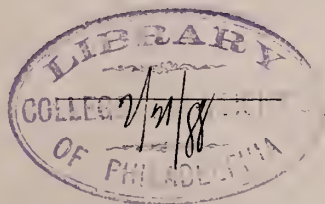
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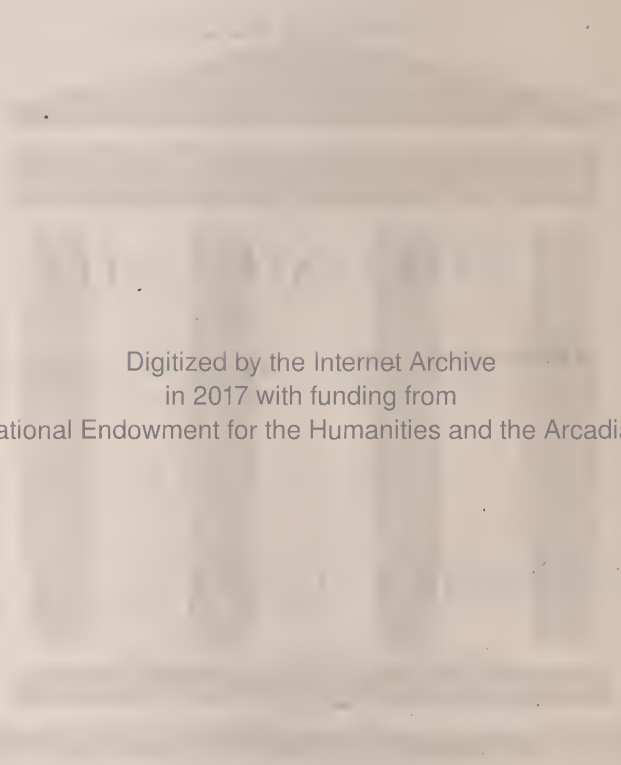
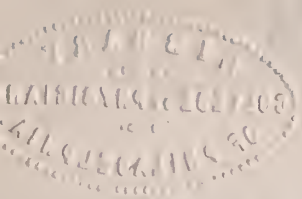
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Original Communications.

ART. I.—**A Practical Paper on Diphtheria.** By JOHN HERBERT CLAIBORNE, M. D., M. A., Ex-President and Honorary Fellow of Medical Society of Virginia, Author of "Clinical Reports from Private Practice," etc., etc., Petersburg, Va.

PERSONAL RECOLLECTIONS AND OPINIONS.—I only propose to write that which I know, or think that I know, of my own knowledge.

My first acquaintance with diphtheria commenced in the person of a little German girl, about twelve years of age, during the 'summer, June perhaps, of 1857. At my first visit I found her complaining of sore throat, pains in the neck and limbs, and of general weakness and discomfort. She had had a chill the day before, followed by fever which had not then abated. There was considerable swelling about the front and both sides of the neck—not glandular—but apparently from inflammatory effusion in the sub-integumentary and areolar tissues. On looking into her throat, the whole fauces seemed lined with some material more nearly resembling a dirty blanket than anything else.

I was quite a young practitioner at the time, and, recog-

nizing something which I had never seen nor heard of before, did the most rational and honest thing I could do—namely, confessed my ignorance and asked for a consultation. An old physician was at once sent for—a man quite eminent in his profession—especially in the branch of surgery, and who had had not only large experience in this country, but the advantages and prestige of foreign study—not so common a privilege at that time as at present. I do not know that he was any wiser than I, but he declined to be interviewed even by me upon the nosology of the case, and sententiously and dogmatically decided that the membrane must be removed from the throat by the scalpel and forceps, which at my instance and request he proceeded to do—and lunar caustic was to be applied, which he left me to do. Our little patient died, of course, the next day from passive hæmorrhage and asthenia.

I had a sort of presentiment, in spite of youth and inexperience, that we were not *exactly* on the right line of treatment, and began to hunt around for some information in reference to this strange disease, which neither my honored preceptors nor my copious text-books had noted or described. I soon found, in one of the “Publications of the Sydenham Society,” I think, an account by Brettoneau, of Tours, of an endemic of sore throat, which had prevailed in that city and vicinity about the years 1821–1822, and which was characterized by the exudation on the fauces of a peculiar membrane, similar in appearance to buckskin, and which he therefore termed *diphtherite*—from *διψθέρα*—a Greek word signifying a skin or hide.

Then I found, in the *Medico-Chirurgical Review*, an account published by some physician in Glasgow, of a similar disease, or perhaps of the identical disease, which for some years had prevailed more or less extensively both on the Continent and Great Britain, and finally of a fearful outbreak of the same sore throat at Bologne only two years before, in 1855. But I soon discovered that there was no occasion to look back for its history and description. It was *with me*, and at the present; and sufficient clinical material was soon on hand, in my own section and practice, to

afford abundant opportunity for its study and investigation.

For one year it prevailed as an endemic amongst us—the same insidious, miserable, malignant foe, falling upon the best and the bravest, the wretched and the vile with impartial and relentless force. And since that time—twenty-seven years ago—if it has ever disported in our vicinage, it left behind an indestructible germ, whose vitality neither the arts of peace nor the ravages of war have been able to destroy. Here and there sporadic cases would spring up in the practice of one physician or another almost every year, whilst repeatedly, as at the present, and for the past twelve months, a newer life would seem to animate the great garoter, and the pall of his presence would darken the brightest and happiest homes.

What is its nature—*its etiology*? What morbid force is it which determines to the faucial region such peculiar conditions of nerve and capillary and cell that an excrementitious membrane should be generated there, whose presence proves a clog upon the ways of life, and whose reaction and infection are felt and shown in a hundred protean forms of functional innervation or organic disorder? Why follow upon that speck of amorphous matter—often not larger than a dime—deposited upon the tonsils—amaurosis, aphonia paraplegia, amentia? I cannot tell. This deposit or exudation can only be the local manifestation of some general dyscrasia. The varied sequelæ which often follow even the smallest local indication are too grave to permit us to believe that the poisoned centres of motion and of sense could have gotten their toxic dose from so insignificant a source. No; the fatal potion has been drunk or inspired or absorbed before that token of its presence in the blood ever appeared upon the fauces. The modern theorist tells us that the bacillus of diphtheria has fixed his tenellæ in the faucial membrane, and that he is making there a nest for his spores—a plant-bed for his death bearing seed. But if he is found there at all, it is only after having traversed the circulation and poisoned the centres of life that he is seeking a new place for further elaboration of his fatal virus—a new point from which he may issue on his destructive raid.

But who has seen this bacillus, this accursed progenitor of so many evils, of so much destruction? Who has caught him, harnessed him, driven him? A distinguished microscopist of New York had a specimen individual of the germs sent him by mail; and, shutting himself up in a room with this sole, but cheerful companion, amused himself for days studying his nature, and observing his "manners and his tricks." He was so jealous of his new friend that he would allow no one else to enter the room, and make his acquaintance, but even had himself fed through a broken pane in the window. But all to no effect. This ungrateful bacillus not only repaid his disinterested attention by throttling his host, but escaped from the room and attacked his wife and other members of the family, and inoculated them all with the dread diphtheria. Who can catch or confine so subtle a visitor?

And this leads us to the question: *Is diphtheria contagious?* The above account as to how it was carried in a letter to the enthusiastic searcher after microbes, and communicated from the solitary chamber in which he conducted his labors, through a broken pane, to wife and others, would seem pretty conclusive evidence on the affirmative side of the question. But as I propose to testify to that only which I have seen, and to that only which I know, or think that I know, I cannot accept the conclusion as definite and fixed. Without entering into any hair splitting definition of the word contagious, let us accept of it as construed by the masses, when they ask of a physician, "is it catching?" is diphtheria "catching?" The many authorities, perhaps most authorities, say, Yes. But if I must answer again for myself only, I am compelled to reply, No—not if small-pox, measles, mumps, typhus, etc., are accepted as types and examples of contagious diseases. A contagious disease having once passed through the system destroys the susceptibility to future attacks of the same disease. Hence, a second attack of small-pox, measles, or mumps, etc., is phenomenal and rare. But is it so with diphtheria? Does one attack give any immunity from a subsequent attack of diphtheria? Does it not really give predisposition to a future attack?

The history of diphtheria then, is *not* the history of a *contagious disease*.

But I may be asked: Is not the occurrence of one case of diphtheria in a house or family liable to be followed by another case in the same house or family? Yes; and so one case of intermittent or remittent fever, or of typhoid fever in a house or family is liable to be followed by one or more cases. And yet neither intermittent nor remittent fever is considered contagious. Any person frequenting the locality in which these diseases are prevalent, or, in the words of the modern microscopists, where their germs or microbes abound, is liable to be attacked by such microbes, and succumbs or not, according to his especial susceptibility or insusceptibility. And if he visits such locality a hundred times, he is liable to succumb to the same microbe a hundred times, and have a hundred repetitions of the same disease. Not so of small-pox, or any other typically contagious disease, in which one attack insures against another attack forever.

I saw recently two families, in one of which were seven, and in the other five cases of diphtheria. In the first, father and mother and five children under nine years of age—all had the disease; all were attacked within a few days of each other—thus precluding the idea of their contracting it from one another. Of these, the father died, but no one of the children; and no other person, doctor, nurse or child, in either family (all of whom were constantly exposed to the contagium, if contagium there were) contracted the disease. And in hundreds of families which I attend, I find that only one case will occur, or two, even in a large family, and that without any segregation of the sick, or the nurses.

Is that the history of contagious diseases? I cannot recall a single instance of my personal knowledge (and my experience has been by no means small) where a person having diphtheria, and having removed to a community at any distance from the locality in which it was taken, has carried the disease with him or imparted it to others. I have repeatedly known persons leave a locality in which diphtheria was prevailing, and, removing to a distance, be attacked with the disease, but have never known any one to “catch” the

disease from such patient. I think we must therefore write of it what a recent and most respectable medical author* writes about scarlet fever, viz: That if contagious, "it is very irregularly so." Niemeyer not only holds the disease to be contagious, but considers that the contagium resides in the shreds of the detached membrane, and, of course, that it is inoculable. Yet Trousseau, Harley, Peter, M. Isambert, and others have failed to get any result from inoculation—the two former enthusiastic and courageous physicians having even tested the question on their own persons. I have never had the courage or enthusiasm to go so far, but I have incidentally and repeatedly had the diphtheritic matter coughed and spit into my face and eyes in the course of my treatment of children, and have recently, and in a most malignant and fatal case, had the little patient to eject into my eyes, whilst examining his throat, a particle of the exudation.

I may be asked then: *What is the cause of diphtheria?* I was once asked, when undergoing an examination before an Army-Board for the position of Assistant Surgeon, "What is malaria?" I replied, "I do not know." The grizzly old officer who was conducting the examination at once said: "That is the best answer I have heard yet." I could have told him what others said; that malaria was a paludal exudation, or that it was an emanation from freshly upturned soil when exposed to the sun and air, or that it was the progeny of decay of vegetable matter when brought into certain relations with heat and moisture. But I had seen the results and manifestations of malaria in so many instances, where I could trace no such conditions, that my regard for the truth would not allow me to commit myself to any theory. And so—of diphtheria.

The pet theory, I think, of the present is: That its microbe finds its most cheerful home, and its most agreeable associations in those damp, dark viaducts of the cities, which make their sewerage, and which are charged with the office of carrying away the noisome drains of the kitchen, the cloaca, and the wash-house. But hundreds of practitioners of medicine meet with diphtheria when not a city or a sewer is

*Bristowe.

within a hundred miles of their clientele. In my own experience, the very worst cases which I have ever encountered—the most malignant, and the most treacherous—have been in a country drained and cultivated, whose streams were sweet and limpid, and whose atmosphere was pure and invigorating. Where in such a region does the microbe find his nest? Where does he breed his noisome progeny? If filth be his food, he would not find it in these happy country homes, and yet he fills out there his grand proportions, portentous of evil and pregnant with deaths. Its cause is as yet occult. Its home is with the good and the bad, the rich and the poor, the cleanly and the uncleanly, the sanitary and the unsanitary—as is the home of malaria.

But no man has presided at the birth of either, or witnessed its evolution. I believe that the causes of both are entities—material, not immaterial or aerial—fungi, microbes, bacilli; something capable of locomotion, and possessing powers of reproduction, of marvellous fertility, and of a vitality akin to the immortal. But I can prove nothing of all this. I reach my conclusions, crude and uncertain as they are, reasoning by analogy, the most unsafe of all methods of argument I am aware. But I am firm in my conviction that the truth lies in that direction, and I believe that the coming microscopist will yet catch, count, and best of all, kill these fatal enemies of the human race, and free us from their deadly power.

DIAGNOSIS.—One of the most patent demonstrations of the adage that “doctors will differ,” seems to me to be exhibited in the fact that a goodly number of physicians consider croup and diphtheria to be identical. I do not wish to be dogmatic, and I know that I have no pride of opinion on this matter which I would not mercilessly sacrifice in the interest of truth; but I cannot understand the coupling together as one, *two* diseases that, in history, in behavior, in sympathy, and in dynamics, are so thoroughly dissevered.

The character of the membrane—its physical character, apparent and microscopic—seems to be entirely different in the two diseases. The membrane of croup, the *product* of

acute laryngitis, is plastic, firm, and semi-organizable*. The membrane of diphtheria, a *deposit* or *exudation*, is amorphous, aplastic, and occurs in many cases *without any sign or suspicion* of inflammation. With it, and preceding it in many instances, there has been no evidence that the patient has taken cold or sore throat—no “calor, rubor, dolor, tumor.” Can any person say this of croup?

Again, as to the history of croup: Was it ever endemic? Did there ever exist in the wildest imagination the idea that it was ever under any circumstances *contagious*? Was it ever known to occur without the exciting influence of cold, or of some mechanical irritant, as a burn or wound?

Can any of this be said of diphtheria? Or, unless the result of some local irritant or accident, does croup occur as a rule except during cold seasons? And does diphtheria appear oftener in one season than another? In summer's heat and in winter's cold, is it not the same—yesterday, to-day, and forever?

Again, in its dynamic force, is not croup, sthenic, inflammatory, and oftener seen in the plethoric and red-blooded patient? And does diphtheria make any distinction as to class of the subjects whom it assails, and does it not manifest at once its asthenic, depressing, and enfeebling influence?

Does croup ever leave in its wake the traces of blood-poison, infecting the centres of life, and yielding paralysis, aphonia, amaurosis, amentia? The only kinship that I could ever trace between them consists in their mutual æsthetic tastes—each showing preference for the young, the tender, and the beautiful. And yet, after all, though both are diseases of the young, diphtheria is much oftener seen amongst adults than croup.

I concede that croup sometimes ensues on diphtheria—a complication as fatal as it is fearful. But does diphtheria

*NOTE.—A few years ago I was fortunate enough to get hold of, and extract the lining membrane of the larynx of a patient—a robust man, a farmer about 30 years of age—who was apparently in articulo mortis, suffering with laryngitis. This membrane came off as a glove-finger; the striæ of the cartilaginous rings were shown on it and minute blood vessels, as if an abortive attempt to establish circulation had been made. This specimen was sent to the University of this State, and may be possibly found in its Museum.

ever ensue on croup? And if not, why not—supposing the diseases to be identical? The cases of croup which I have seen, consequent upon or occurring simultaneously with diphtheria, have been cases of simple extension by contiguity of inflammation from the mucous membrane of the digestive tract to the mucous membrane of the air passages, from the pharynx to the larynx—an inflammation not specific nor the result of diphtheria, but an inflammation called out by local irritating treatment—caustics, mops, and gouges.

And this introduces the subject of TREATMENT.

And 1st: Is *tracheotomy* ever justifiable, or does it ever offer any prospect of cure, in any case of croup *ensuing on diphtheria*? In cases of ordinary pseudo-membranous laryngitis, true *croup*, this is a resource of great promise and of great utility; but in *specific diphtheritic* croup, should it ever be resorted to? Of course there are bad cases of croup which may be incident upon very mild cases of diphtheria, cases of croup in which the danger of death from asphyxia is very imminent, and the danger of death from asthenia very remote; and in these cases an operation may be justifiable. But such cases, in my opinion, are very exceptional. In a very great majority of cases of croup that I have seen, complicated with or incident to diphtheria, the blood has already been so thoroughly poisoned, and the symptoms of asthenia have been so grave and so patent that the idea of so serious an operation as cutting into the wind-pipe could not be entertained. The shock and the new wound would supplement the evil already done, and the patient would almost necessarily succumb. And this has been the case and result in every instance in which I have ever known the operation to be performed, whatever the age of the subject.

Other treatment is both *local* and *constitutional*.

Of the first or *local treatment*, the least that is done the better for the patient. A detergent gargle with a patient who can use a gargle, or a detergent solution by spray with a patient that does not feel any inconvenience from it, will serve to cleanse the throat and to make the patient more comfortable. Perhaps hot water is as good a gargle as any-

thing else; or a teaspoonful of chlorate of potash, or of hypo-sulphite of soda, or of boracic acid, or of chloral hydrate to the pint of hot water, used as a gargle every three hours, or oftener if desired. For the spray, perhaps the formula below* is as good as anything else. But any irritating application, as iodine, or nitrate of silver, or carbolic acid, or anything else of sufficient strength to set up any inflammatory action is productive of evil, and evil only. I have fought the mop and the probang from my first acquaintance with the disease; and though I stood alone for many years, I am glad now to know that I have many cöadjutors in my crusade against their cruel misuse. Under irresistible temptations, I have occasionally pulled off with my fingers, or with the forceps, considerable portions of semi-detached membrane flopping about the fauces or hanging from the velum, and have never yet done so without cause of regret.† I have invariably in doing so torn some small parts of the mucous membrane about the fauces, and in doing so have made a new plant-bed for the bacillus diphtheriæ which he has never hesitated to take advantage of. Now, I almost invariably, except as before noted, leave the local treatment to nature.

* R.—Sodæ biborat.

Acid. boracic	5j.
Glycerini	aa 5j.
Acid. carbolic.	
Ol. gaultheria	aa gtt. xvj.
Aq. rosæ.....	3xvj.

M. Sig. For the spray.

†NOTE.—Some few years ago, I was summoned in consultation to see a little German boy, about two years old, who was apparently suffocating from a partially detached and most extensive exudation, covering the whole fauces. I passed my finger at once into his throat, and brought out a large mass of amorphous lining that left the fauces comparatively clean, and restored the boy to respiration and apparently to life. The father, a bluff old Teuton, caught me around the body and lifted me up in his delight, calling me his saviour, etc. I urged him to desist, telling him that the danger had not passed, and that we "must not hallo until we got out of the woods." In another twenty-four hours, the throat was as fully covered again with membrane as if it had never had a shred removed, and on the third day the child died, slightly croupy but mostly from asthenia. Unfortunately some one in the meantime had furnished my German client with a scrap, in which I had denounced the active interference with the membrane in the throat, in case of diphtheria, and he met me in rage. Not my saviour this time, but "you kill my child; you say so yourself. What you take *dot* stuff from his throat for?" etc., etc. And so the engineer was hoisted by his own petard.

For the excessive sensitiveness of the faucial membrane sometimes following the cleaning off of the diphtheritic deposit, and rendering it almost impossible to induce a patient to take food on account of the pain caused by deglutition, I have found that a four per cent. solution of cocaine applied every three or four hours would give marvellous relief.

Sometimes I have thought that it were almost as well to leave the *general treatment* to the same wise and beneficent Physician. But, generally, I am sure that, by the judicious use of certain remedies, nature may be aided in casting out the morbid material that is poisoning the blood, and may be strengthened and fortified in her work. Many remedies have been recommended for the good and for the bad forms of diphtheria. In truth, the mildest cases need no treatment, and unless we are very lucky we will be likely to conclude that many of the bad cases could have done no worse without treatment.

I do not propose to enumerate the long array of remedies which have been put forward as cures for diphtheria. I shall only speak of those which have done most good in my own experience; and whilst no disease can be directly cared for by any routine regimen, I think we can as nearly prescribe by rote for diphtheria as for any other malady which I have known.

In cases requiring any general treatment, I order at once the following solution, which contains as many elements calculated to meet general indications as any other combination that I can devise:

R_y.—Potass. chlorat.

Tinct. ferri chloridi..... aa ʒij.

Liq. arsenici chlorid.....gtt. xij.

Hydrarg. bichloridi..... gr. ¼.

Syr. aurantii cort.....ʒj.

Aquæ fontanæ.....q. s. ad ʒvj.

M. S.: Give one tablespoonful every two (2) hours to an adult, following in one hour and a half by tablespoonful of whiskey in milk or water. (Proportion the dose of both according to the age of the patient, if a child.)

For food, give milk, beef-tea, egg-nog, coco—given soon after the medicine or after the whiskey—and in such quantity as not to cloy or sicken. I think that the mistake is often made of crowding the stomach too full or filling it too rapidly. If there be chill and fever in the beginning of the disease—as is often the case in this climate—I give a mercurial laxative when first called in, to be followed by full drachm doses of hypo-sulphite of soda as often as may be necessary to keep the bowels open, and from five to twenty grains of quinine, according to the age of the patient, every morning as long as there are afternoon exacerbations. For the swelling, beginning generally in the glands of the throat, and sometimes extending into the sub-integumentary tissues of the whole neck, until it is swollen out on a plane with the face, I have found nothing equal to a fifteen per cent. solution of oleate of mercury, rubbed in every four hours until a pretty good crop of vesicles appears. When this appears, I have often seen the swelling subside as if by magic. When the oleate fails to relieve that symptom, I regard the case as grave in the extreme, and make my prognosis accordingly.

One most disagreeable and distressing complication of the disease—the extension of the diphtheritic inflammation into the nares—is treated by detergent washes, the nostrils being syringed out repeatedly in the twenty-four hours. I have seen the greatest distress caused by this treatment, especially in children; and if any physician will practice the same process on himself, using the same detergent on his own Schneiderian membrane—even in its healthy state—he will not be likely to desire a repetition of the operation. If any thing be used, I earnestly recommend that it be only a warm and weak solution of table salt; but I am sure that nature had better be left to cleanse these passages herself. Besides, no man can say that he will not inject the Eustachian tube, in the frequent performance with the syringe, and thus carry the disease into the middle ear. I have no doubt but that this often occurs.

Prophylactics and Disinfectants.—Upon the theory that diphtheria is the result of the presence in material body of

certain germs, and which lurking about given localities, take hold of and destroy animal life by breeding their festering spores in the ways thereof, it seems that we should be able to find, and I trust that we shall find, some disinfectant powerful enough to attack and destroy these insatiable parasites and ferments. But what is the present prospect? In the chamber of the sick, there is no germicide sufficiently pervasive, and sufficiently powerful to destroy these microbes, save steam at about 180° or 200° F., or the fumes of sulphurous acid so concentrated as to render the atmosphere of the room irrespirable. In such cases, the germicide would be also a homicide. Until the sick can be removed, therefore, nothing can be efficiently done except to give as much fresh air, and as much ventilation as possible to the room, consistently with the safety of the patient. We can attack such microbes as may be supposed to be found in the excreta of the body, in the discharges from the nose and throat with an antiseptic solution; and I know of nothing superior to the following:

R_y.—Corrosive sublimate

Common salt.....^{aa} ʒij.

Water.....ʒiv.

M. S. Teaspoonful to a pint of water. To be put into the vessels into which the discharges are deposited, or even to sprinkle the floors and wipe the windows and wooden work of the room, or to sprinkle the bedding as far as good judgment and common sense may deem practicable.

The fumes of chlorine, carbolic acid, tar, etc., with which we often find the rooms of the sick deluged, can do nothing more than cover up under a false cloak the true danger of infection, if there be infection—and worse, substitute for a pure atmosphere, one loaded with unwholesome and irrespirable vapors. And as it is rarely probable that one room in the house is the sole home and habitation of the villainous bacillus, I do not segregate the other members of a family residing in the same house, and thus cut off from the sick the sympathy and care of their immediate friends and kin.

But as I know of no vaccination, inoculation nor internal remedy which will furnish prophylaxis or immunity against

the attack of the microbe, from those invading his premises, I usually advise as little communication as practicable with the outside world, especially with those that are weak and timid.

32 Union Street.

ART. II.—The Direct Electrization of the Heart—A New Method. By J. LEONARD CORNING, M. D., New York, N. Y.

The circumstances are so numerous and of such frequent occurrence in which a re-invigoration of a feeble or arrested heart's action is a desideratum of first importance, that it is small matter for surprise that physicians should even at an early stage of medical history have been fully alive to the magnitude of the question. It must be confessed, however, that apart from the brilliant results of physiological research, little of practical import has been realized. Nor is the lack of success surprising when we consider the practical difficulties in the way of medication in cases of heart-failure from whatever source it may arise. The very term heart-failure implies a condition which is antagonistic to the introduction of remedies into the system—to their localization in the cardiac centres in the medulla.

With the ever increasing knowledge obtained of the physiological properties of electricity, it was confidently anticipated that the problem would meet with speedy solution. It cannot, however, be said that those anticipations have heretofore been realized. The reasons for this failure, so far as I have been able to apprehend them, are as follows:

1. When attempts are made to accelerate the heart's action by galvanization of the sympathetic in the neck, excitation of this nerve is unavoidably associated with a concomitant irritation of the adjacent pneumogastric; and experience has shown that a retardation rather than an acceleration of cardiac action is the result (*vide* my paper on "Electrization of the Sympathetic and Pneumogastric Nerves," *New York Medical Journal*, February 23d, 1884). It is thus

evident that a concurrence of anatomical and physiological circumstances in the neck renders the prospect of augmenting the action of the heart, by stimulants applied to the nerves situated in that region, extremely doubtful.

2. Owing to the inaccessible location of the heart within the thorax, it is evident that the direct concentration of the electric current upon that organ is opposed by very considerable anatomic obstacles. This at least holds good in so far as the posterior aspect of the heart is concerned. It is true that this objection applies far less to the lower portion of the anterior cardiac aspect; but nevertheless, in passing a current in an antero-posterior direction, or *vice versa*, through the organ, it is evident that the resistance to be overcome is enormous. Nor is it a matter of practical consequence whether the resistance is located before or behind the organ, since the result is the same—attenuation and dissipation of the current.

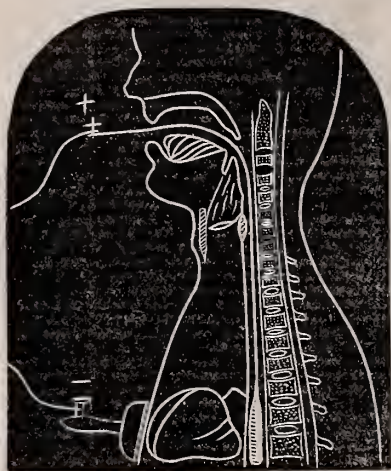
These, then, are the formidable obstacles which, up to the present time, have rendered the electrical excitation of the heart—whether attempted directly or indirectly—a somewhat dubious procedure.

I have attempted to overcome these difficulties, and, as I believe, with entire success. The method which I have devised is as follows :

I first spray or brush the posterior wall and other portions of the pharynx with an eight-per-cent. solution of the hydrochlorate of cocaine. When I have satisfied myself by repeated trials that reflex nausea has been sufficiently abolished to admit of the introduction of the handle of a spoon as far as the epiglottis, I proceed to the second step in the method. This consists in the introduction of an œsophageal electrode, well insulated, except for about an inch-and-a-half at the point. The electrode is passed down the œsophagus until the non-insulated extremity of the instrument lies behind the heart; or in other words, when the region situated between the seventh and ninth dorsal vertebræ has been attained. In order to ascertain beforehand how far it is necessary to introduce the electrode, I am in the habit of placing the tip of the instrument over the

spinous process of the eighth dorsal vertebra, and accurately measuring the distance between that point and the mouth. With a view to preventing the descent of the electrode beyond the desired points, a round disk of leather or metal is secured in front of the mouth, when the sound has been introduced as far as requisite. The electrode is then connected at its disengaged extremity with one of the conducting cords of a faradic or galvanic battery. The remaining conducting cord of the battery is then connected with a flat electrode, which is then placed over that portion of the anterior aspect of the heart not overlapped by lung (a triangle whose apex is at the fourth left sternal articulation, extending downwards and outwards to the union of fifth rib with cartilage, and inward and downwards to the sixth rib). To facilitate matters, the centre of the electrode may instead be simply placed over the point where the apex beat is felt. When an assistant is not available, I am in the habit of securing the external electrode in place by means of a simple band of elastic webbing, which is passed around the thorax and secured in place by an ordinary buckle.

A glance at the annexed schematic drawing will exhibit in



a graphic manner the immense theoretic advantages of this bi-polar method of cardiac electrization. The chief disadvantage of such a method heretofore was found in the initial gagging and dyspnœa incident to the introduction of the electrode into the œsophagus.

As previously noted, however, these objections fall to the ground in the presence of a dexterously performed

cocaine irrigation of the pharynx.

In opium and chloroform poisoning, as well as in suffoca-

tion by drowning, the method should prove of value, but I confess that the opportunity has been denied me of thus applying it. On the other hand, I have been greatly impressed with the benefit to be derived from this method of treatment in cardiac weakness and tremor, due to excesses, and in conditions characterized by intermittent and irregular action. The faradic current, judging by my past experience, would seem to be indicated in the above morbid conditions. On the other hand, that occult neurosis, angina pectoris, is undoubtedly benefited by the constant galvanic current. Care must, however, be exercised not to employ currents of great strength, since otherwise damage to the œsophagus might occur. This accident has, however, never occurred in my experience.

As to the polarity of the electrodes, I would merely add that I usually connect the œsophageal sound with the positive pole of the galvanic battery. How much real value there is in this mode of application, I am still in doubt. Of course, where the faradic current is employed, the polarity of the electrodes is of no practical consequence.

The object in bringing forward these observations is not to dazzle the eyes of my colleagues with a therapeutic novelty. On the contrary, my primary desire is to call the attention of the profession to what I cannot help believing is destined to be a valuable addition to our medical armamentarium; and secondly, I am actuated by an ardent desire to see my method tested by those gentlemen, who by reason of their large clinical opportunities, afforded by general practice, are in a favorable position to become cognizant of its widest field of application.

CESAREAN SECTION AFTER THE DEATH OF THE MOTHER.—Dr. J. M. Hays, of Oxford, N. C., reports a case of this kind in the North Carolina Medical Journal. As soon as he satisfied himself that the mother was dead, he quickly opened the abdomen and removed a living child from the uterus; the child was eight and a half months old, and bids fair to live.

ART. III.—**Acute Endocarditis and Hypertrophy of the Heart; Heart-Clot Complicated with Small Fatty Kidney—Death and Post-Mortem Results—Blood-Clot Solvents.** By HENRY P. WENZEL, M. D., Milwaukee, Wis.

Fred. C——, age 16 years; had several severe chills, followed by high fever, intense headache, delirium, pain over cardiac region, and violent palpitation of the heart during the last two days. To-day—Feb. 20th—I was called to see him, and learned the following history: His mother died last fall of chronic Bright's disease, complicated with œdema pulmonum, aged 46 years. The other members of the family are healthy; the ancestors were long-lived; and there is no cachexia or struma in the family. Fred. had a peculiar pale color for more than a year, and abrasions healed with difficulty. His appetite was good, but he lost flesh. He had been at a wedding four weeks previously, and from that time his health failed rapidly, and a week ago he quit farm-work, complaining of general lassitude.

His face is puffed and dusky; he suffers continuous nausea and some vomiting, obstinate constipation, suppression of urine; but there is no œdema. His eyes are lead-colored; vision impaired; skin waxy, harsh and dry. Temperature, 100°F.; pulse, hard, abrupt, 102; heart impulse forcible, giving a purring thrill to the hand; apex-beat in the sixth intercostal space below left nipple; distinct friction murmur and blowing sound with first sound of the heart, most distinct at the base, transmitted along the sternum, very distinct at the xiphoid cartilage, and heard in both carotids and near the spinal column. I ordered ten drops of tincture of digitalis, and three drops of tincture of veratrum viride every two hours, and one quarter grain podophyllin every three hours; lemons and iced-drinks are to be given freely; and hot fomentations to be applied over loins and epigastrium.

Feb. 21. Temperature, 99.5°; pulse, 96. Great dyspnœa, and heart very tumultuous. Less pain in the head; extremities warm; bowels moved freely; voided six ounces of alkaline urine, sp. gr. 1005, loaded with albumen. Prescribed: Tinct. digitalis, ten drops; tinct. belladonna, eight drops in nitrate of potash mixture, every four hours; also compound jalap powder, twenty grains at bed-time; Tully's powder *pro re nata*; continue affusions; apply cantharidal blister 6x6 inches over præcordial space.

Feb. 22. Had two convulsions last night, lasting three, and

one-and-a-half hours respectively. Temperature, 99° ; pulse, 88. Large blister filled with tenacious, straw-colored, albuminous fluid; heart action more quiet; breathing oppressed, moist râles over both lungs; skin moist; no pain; aphonia; passed fifteen ounces pale, alkaline urine, sp. gr. 1005, nearly solid albumen. Directed him to have two baths, as hot as can be borne, daily; also milk, wine, and oranges. *R.* Tinct. digitalis, tinct. muriate iron \overline{aa} 10 drops, every four hours. Dressed blister.

Feb. 23. Had another slight convulsion, of short duration, last night, after which he sank into a deep sleep (coma?), from which he could not be aroused for several hours. His breathing was "heard all over the house." Face dark-red; heart-impulse feeble; temperature 97° ; pulse—jerky—80; stertor. Took a pint of blood from right arm; pulse jumped to 98; stertor less; cough, dullness over both lungs, and sonorous and sibilant râles were heard on auscultation; jerking of shoulders; no pain, no œdema. Twenty-four ounces of urine were passed during last twenty-four hours; sp. gr. 1007; alkaline; albumen by all tests. Ate some toast and stewed plums. At 5 P. M., the pulse was full, 88, and temperature 98.6° ; voided fifteen ounces of urine at one time; sp. gr. 1010. He was to have three baths, each 30 minutes, daily. *R.* Tinct. digitalis, muriate tinct. iron, and sweet spirits of nitre. Diet same.

Feb. 24—10 A. M. Eighteen ounces of urine were passed in twelve hours; alkaline; sp. gr. 1010.5. Another short convulsion last night. Pulse and temperature normal. Sounds simulating the flapping of a ribbon are heard during the heart's systole and diastole. Râles diminished; breathing easy, pupils dilated, obscurity of vision continues, aphonia persists, skin moist, lips bluish, rust-colored sputa, buccal cavity dry, extremities pale and cold; no œdema. At 3 P. M., met Dr. Miller in consultation. Drew off twelve ounces of urine; reaction as in previous specimen. Dr. Miller advised drastic cathartics and the more irritant diuretics, and *absolute diet*, agreeing with my diagnosis of acute endocarditis, heart-clots and kidney disease. He hoped for recovery, while my prognosis was very grave.

Feb. 25—10 A. M. Eighteen ounces of urine voided in the past twelve hours, alkaline, and having sp. gr. 1005, three-fourths albumen. Had another convulsion, which was arrested by the hot bath. Refuses all food and drink, except cold water. Take calomel and jalap, \overline{aa} $\overline{5j}$ at once. At 5 P. M. temperature was 98.6° , pulse 88. Violent ca-

tharsis, urine passing freely, pupils less dilated, buccal cavity moist. Wants rich soup.

Feb. 27. At 5 P. M., temperature was 98.6° , pulse 88. Bronchial râles, respiration moderately free. A chirping or cooing sound is heard distinctly two feet from his chest and near the spinal column. His voice is stronger; there is no pain. Baths cause dizziness. Thirty-six ounces of alkaline urine, sp. gr. 1012, voided in last twenty-four hours, with less albumen. Take muriated tinct. iron and dilute sulphuric acid, \overline{aa} gtt.x every four hours in sweetened water.

March 1. Great excitement, nausea, vomiting, insomnia, pain in throat. A large (diphtheritic?) ulcer is on soft palate and left pillar. Twenty-four ounces of alkaline, albuminous urine, sp. gr. 1012, has been voided in past twenty-four hours. Let him use the following solution freely as a gargle:

R. Chlorate potash..... $\overline{5ij}$.
Muriate tinct. iron..... $\overline{5v}$.
Water..... $\overline{5iv}$. M.

Also take twenty grains potassio-tartrate of iron in a table-spoonful of wine; also eggs, milk, or beef-tea.

March 2. Slept all night. Jaws feel sore, but throat is better. "I am hungry." Thirty ounces alkaline, albuminous urine, sp. gr. 1012, voided in last twenty-four hours. Treatment continued.

March 4. Temperature 98.5° , pulse abrupt, full, 72. Præcordial area of dullness increased to the right and downwards; friction and blowing sounds heard in all positions, and first sound of heart is completely masked. Some dyspnœa; no pain nor œdema; head "feels heavy" Ulcer healthy looking; pharyngeal mucous membrane deeply congested; mouth very dry; coarse râles. Thirty ounces pale-yellow alkaline, albuminous urine, containing flocculi and a grayish sediment, sp. gr. 1014. passed in last twenty-four hours. Continue treatment. Bath at night, and to have sulphate cinchonidia, grains ij, and podophyllin, gr. $\frac{1}{4}$, every three or four hours.

March 5. Patient up part of the day in a rocking-chair. Feels "well, but weak."

March 6. Temperature 99, pulse 76. Heart very tumultuous; distressing pain over cardiac area, bronchial breathing, and dullness over both lungs, dyspnœa, systolic bellows and friction murmur heard over whole chest and back; liver pulsating, mouth and teeth dry, skin cold and clammy. Last night at 11:30, his sister, by mistake, used a strong decoction of tobacco for his throat. Emesis rapidly followed,

and now nothing can be retained. Forty-eight ounces neutral urine, sp. gr. 1010, composed of three-fifths albumen, voided in last twenty-four hours. Discontinue all medicines; give one drop fluid extract of ipecac every two hours, with small quantities of bland nutritious food, with a few drops of wine at intervals.

March 8. Great dyspnœa. Cannot distinguish or count fingers at fifteen feet. Thirty-four ounces of alkaline, albuminous urine, sp. gr. 1008, have been voided in last twenty-four hours. Nausea and vomiting stopped. Continue wine and iron.

March 9, 10, 11. Some symptoms as previous day. From thirty to thirty-six ounces of alkaline urine passed daily, sp. gr. 1008; very little albumen. Continue wine and iron; also milk and eggs.

March 12—10 A. M. Temperature 97.1°; pulse abrupt, 80; respiration 36; heart very tumultuous, sounds masked, cooing murmur very distinct during systole and diastole; commencing pulmonary œdema; epistaxis; tears his hair; voice barely audible. He cannot distinguish or count fingers at three feet. Urine suppressed since yesterday; bladder is empty. Predict death within some hours in convulsions.

11 P. M. Heart very tumultuous; almost impossible to get breath; croupous cough, followed by ejection of streaked yellow mucus.

March 13.—2 A. M. Passed several ounces of urine. 3 A. M. Amaurosis complete, facies Hippocratica, respiration easy, heart quiet, but murmur distinct, voice strong and steady, intellect clear and acute. The first spasm came at 4 o'clock; tetanic convulsions, with opisthotonos, followed each other rapidly, and he died in spasm at 5:30 A. M.

Autopsy fifteen hours after death. Not allowed to examine brain. Features natural; rigor mortis marked. *Pericardium* contained an ounce of serum. External surface normal, internal surface presented three fatty nodules, each the size of a pea; no adhesions. *Heart:* The apex lay midway between the left nipple and xiphoid cartilage—the base extending two-and-a-half inches to the right of the sternum—length, seven-and-a-half inches; thickness, four inches; weight, fifteen and-a-half ounces. Left ventricle, hypertrophied; wall, one-quarter inch thick. The cavities present signs of recent inflammation, roughening of the endothelium; several fatty spots near the base of the mitral valves; columnæ carnæ hypertrophied; trabeculæ and cordæ tendinæ thickened. Mitral valves injected, roughened; aortic valves

tough, grooved, and the left partly torn away from its base—sinuses of Valsalva empty; tricuspid râles thickened, rough, and insufficient; pulmonary râles normal. There were four atheromatous spots on the middle of the aortic arch, anteriorly involving the inner and middle coats. The heart was empty of fluid blood, but the following clots were in its cavities:—1st. A clot seven inches long, three-eighths of an inch wide, three lines thick, extending from the left ventricle into the aortic arch beyond the valves; one end was entangled in the tendons of the valves—the other free (aortic), very tenacious, and of a buckskin color. 2d. The left auricle contained a clot two-and-a-fourth inches long, one-and-one eighth inches wide, and half an inch thick, of irregular shape, and sending branches, each an inch long, into two pulmonary veins, and a slender filament through the mitral orifice, and attached to a tendinous cord. The body of the clot was entangled in the muscoli pectinati, and of similar color and consistency as the one mentioned. 3d. The right ventricle contained an irregular, dumb-bell shaped clot, four inches long, three-sixteenths of an inch wide, and a line thick, extending into the pulmonary artery about an inch. It was entangled in the cords of the valves, and appeared to be of prior formation—very dense, tendinous, elastic, and of a glistening, greyish-white color. 4th. The clot in the right atricle was two inches long, one inch wide, and a fourth of an inch thick, entangled in the muscoli pectinati, sending a filamentous prolongation through the tricuspid orifice, and connecting with the clot in the ventricle. About half of this clot was *ante-mortem*—a nucleus—and the outer part of *post-mortem* formation. *Pleura*—injected; no adhesions; pleural sac contained a few ounces of serum. *Lungs*—dark color; grate under the knife; gorged with black, fluid blood. The bronchial tubes and alveoli are blocked up with frothy, sero-mucus; there are some fatty spots, and at several places the lung cells are lacerated. *Liver*—injected, enlarged, pressed about two inches downward out of position; gall bladder very small, cavity holding only a dram—and empty. *Stomach*—natural. *Peritoneum*—normal. *Kidneys*—right measures three by two by one inches; weighs three ounces, apparently healthy. Left measures two-and-a-quarter by one-and-three-fourths inches by half an inch; weighs two-and-one-fourth ounces; capsule adherent, causing laceration of cortical substance when removed; cortical substance mottled; pyramids fatty; calyces and infundibula lined with fat; no trace of endothelium.

Solution of Clots.—The clot from the left auricle weighed 220 grains. It was divided into thirteen parts, and each placed into an ounce of solvents named below at the same time, and kept at the same temperature, with the following results:

1. *Alcohol*—hardened the specimen after three weeks' maceration; color of tanned sheep-skin; specimen same consistency and appearance two years later; fluid clear; no sediment.

2. *Chloroform*.—At the end of three weeks' maceration, the clot was perfectly preserved, hard, elastic, glistening, white, has the appearance of tendon, of similar appearance two years later, liquid clear, no sediment.

3. *Solution of caustic potash* (90 grains to water 5j).—After forty-eight hours the clot was dissolved to a dirty, yellowish jelly; during first eight hours of maceration, but little change noticed.

4. *Carbolic acid*—hardened it; no sign of solution on the fortieth day; same a year later.

5. *Saturated solution of bicarbonate of soda*—dissolved it in ninety-six hours to fœtid, brownish-colored jelly.

6. *Acetic acid (dilute)*, *U. S. P.*—partial solution in twenty-one days; complete solution in thirty-eight days. Sediment has the appearance of mucus.

7. *Liquor ammoniæ fortior*, *U. S. P.*—Complete solution in seventy-two hours; thin, glycerine sediment.

8. *Saturated solution of citric acid*.—Complete solution, without having a sediment, in fifty-seven hours.

9. *Saturated solution of chloral hydrate*.—A trace of solution after thirty-two days' maceration; six months later no further change.

10. *Saturated solution of corrosive sublimate*.—Very hard and white after thirty days' maceration; the liquid had a metallic scum on its surface.

11. *Saturated solution of bichromate of potash*.—Colored dirty yellow after thirty-four days; no sign of solution.

12. *Spiritus ætheris nitrosi*, *U. S. P.*—Clot hard and brittle after forty days' maceration; liquid clear.

13. *Scheffer's liquor pepsini*—*Ry.* Sacch. pepsini 64 grains, aquæ f5v, acid. hydrochloric f5j. *M.* Dissolve, and add three fluid ounces of glycerine, and filter. Dissolved the clot in twenty-two days.

From the solvent properties of liquor ammoniæ fortior, it appears that the internal exhibition of ammonia in heart-

clot, or blood-clots in the body, is untenable. Certainly, the amount of ammonia required to disintegrate any fibrinous clot would act as a caustic poison, and be detrimental to life; and while the patient *might* die of clot *without* the internal use of ammonia, he *certainly will die*, if a sufficient quantity of the solvent were administered, of an irritant poison. There is a great difference between the human organism and a test-tube.

In the case I have reported, the enlargement preceded the endocardial trouble, as it is impossible to conceive of sudden hypertrophy of the heart muscle. In my opinion, the fatty kidney preceded the cardiac hypertrophy; but it is difficult to comprehend the oft-repeated uræmic convulsions, while one kidney was evidently healthy. Of course, there may have existed a serious lesion of the brain. It is remarkable that, although for a time there was urinary suppression or scantiness, dropsy was absent throughout the sickness of the patient, from the time of my taking charge until the lethal *denouement*.

Up to this time I have found but few cases of *ante-mortem* heart-clots reported in the literature at my hand; and to my knowledge, Dr. M. L. James, of Richmond, Va., is the only observer who has spoken directly of solvents for heart-clots. (*Trans. Med. Soc. Va.*, 1877.)

Since this has been written, a number of cases of heart-clot, diagnosed before death, have been reported; and it is hoped some one will utilize the materials, and exhaustively treat the subject.

Since 1879, an older brother of the patient whose case I have reported suffered from albuminuria, palpitation, short breath, anorexia, etc, for about six months; but treatment soon changed the difficulty, and recovery followed promptly, and at this writing (Dec., 1885) he is in the best of health. Is it possible that heredity plays a *role* in this instance?

ANTIPIRYNE.—M. Dumolard gives preference to the following formula: Antipyrine, 20 parts; Jamaica rum, 30 parts; syrup and water, each, 150 parts. In typhoid fever he gives a teaspoonful three times a day.—*N. Y. Med. Jour.*

ART. IV.—Treatment of Diphtheria. By WM. J. CRITTENDEN, M. D., Unionville, Va.

When I began the practice of medicine, I (following the teachings of Lusk and others), was a warm supporter of the view, that diphtheria was a local disease, or at least primarily so. But after more extended research, maturer thought and abundant clinical observation, I am fully satisfied that it is a constitutional disease, and the lesions found, are only local manifestations of the malady.

I will, for convenience, divide the treatment into *Local, Constitutional and Supporting*.

Local Treatment.—In the early stages, I have found no treatment so efficient as salicin blown into the throat every two or three hours, lessening the intense congestion of the parts, relieving the irritability, and also acting as a tonic. It is in this stage, as soon as the whitish exudation makes its appearance, that thorough and complete cauterization of this exudation seems to arrest the progress and abridge the duration of this disease. Later on, I use a gargle of chloral hydrate and carbonate of ammonia, ten grains of each to the ounce, and alternate with a gargle of lime water, as strong as it can be borne by the patient. The throat should be gargled every hour or two with these solutions alternately, and always before eating or drinking. If the membrane seems to be fast detaching itself, I use a mopping solution of chloride iron, chlorate of potash and lime water. The interval between each mopping must be determined by the rapidity with which this exudation is separating itself. Care should always be taken not to allow the patient to swallow any of this exudation, as it will be digested as food.

In small children who can not gargle their throats, I use a spray of lime water in lieu of the gargling solution, and I also use the above mentioned mopping solution. I think it can be safely said that no local application should be used which will cause vomiting or pain beyond five or ten minutes. In the late stages of the disease, I use a gargle of carbonate of ammonia, and if there is any fetor, I use "Listerine" to correct this.

Constitutional Treatment.—Quinine is an eligible tonic in all stages of the disease. I also find the following to act well.

Ry Hydrarg. chlorid. corrosiv.. gr. j.
Tinct. ferri chloridi..... ʒ j.

M. S.—Dose ten drops every three hours for a child six years old.

I frequently combine quinine with this prescription. As soon as there is the least failure of the vital powers I use free doses of carbonate of ammonia. The kidneys seem to suspend their functions, very little urine passing. In such cases bicarbonate of potash combined with tincture of digitalis will relieve this trouble. Moreover, the digitalis will tend to quiet the restlessness and prevent the rapid, thready, feeble pulse. Diarrhœa claims astringents, such as bismuth or bismuth and pulvis opii; cough should be allayed by appropriate treatment. For the irritable stomach, counter-irritation with mustard, iodine or an aromatic plaster. Drop doses of iodine act well to quiet the stomach. But a host of other remedies to check the vomiting may be tried seriatim.

After convalescence is declared, a tonic of iron, quinine and nux vomica should be used. If any paralysis be present, use strychnia, phosphorus and electricity.

Supporting Treatment.—First in importance is alcohol, which should be given to its full extent or as much as the patient will bear.* I have given an adult one ounce of whiskey per hour for seventy-two hours without the least sign of intoxication. Milk punch is an excellent form in which to give alcoholics. Valentine's Meat-juice and glycerine, coca, beef tonic, milk, beef tea and the most nutritious food which can be made should be given.

Diphtheritic Croup.—Frequently is the practitioner called to treat this the most formidable of the extensions of the diphtheritic membrane. I have never met with a case after

* In a case of diphtheria some years ago under the care of the Editor, a ~~quantity~~ *hint* of best rye whiskey was daily given a child nine years old for two days. At no time could either the intoxicant effects or odor of whiskey upon the breath be detected. The child recovered. Afterwards a single dose of less than a table-spoonful of the same brand of whiskey, injudiciously given by the mother, made the child drunk. Whiskey is undoubtedly a valuable remedy in diphtheria, but not in croup.

the seventh or eighth day of diphtheria. It is here our treatment must be heroic, and that with which I have had the greatest success is calomel, carbonate of ammonia and tannin. For a child 8 years old I commonly use the following:

R \bar{y} . Calomel.....5ss.
 Carbonate ammonia..... gr. x.
 Tannin..... gr. ij.

M. S.—Give every hour.

The tannin is used simply to prevent salivation by the calomel.

As soon as distinct rattling is produced, I use an emetic of sulphate of zinc.

The room should be kept in a complete fog of lime vapor, produced by the slacking of lime. Whiskey should enter into this treatment sufficiently to stimulate the patient well. It is a mistaken idea to vomit the patient so much, as it defeats the main end to be kept in view—*support*. Vomiting should not be resorted to unless we find that there is something loose in the bronchi, trachea or throat, which will cause rattling. After the patient begins to vomit the membranes, expectorants and supporting treatment are indicated. In small children care should be used, lest a piece of loosened membrane should cause suffocation.

Failing in the above line of treatment, I should most undoubtedly resort promptly to tracheotomy.

Clinical Reports.

Case of Albuminuria in Pregnancy, with Dilatation of the Heart, followed by Hemiplegia—Use of *Veratrum Viride*—Recovery. By I. S. STONE, M. D., Lincoln, Va.

Mrs. M., aged 32, widow, had been married seven years prior to this, her first pregnancy. In September, 1885, she presented herself at my office to ascertain "her condition." At this time she appeared to be in perfect health. She had none of the signs of pregnancy, save cessation of her menstrual function, and was in doubt about her condition. I assured her, however, that it was probable she was pregnant, which fact was soon confirmed. At this time—four-and-a-

half months prior to her accouchment—she had no symptoms of cardiac disease or dropsy; indeed, she appeared to be in splendid health, as she was in physique and appearance.

On January 14th, 1886, four days before labor set in, I was called to see her for a “cough and difficulty of breathing,” when I was greatly astonished to find her in great danger of heart failure, and suffering with general dropsy. The friends of the patient, with profound confidence, as well as ignorance, assured her that it was useless to send for a physician, “as it would all get right when the child was born.” The patient was unable to lie down on account of dyspnoea. The heart’s action was obscured by some pericardial effusion, and its sounds very far from normal—there being no distinct intermissions between the first and second sounds. The pulse was correspondingly feeble, and could not be counted; respiration 75 per minute. Urine highly albuminous, and very scanty. When a small quantity of the urine was boiled in a test-tube, it became nearly solid, and would not run out of the inverted tube. Epithelial casts were also present. Digitalis with potassæ bitartratis in full doses was prescribed with good effect, and her condition had improved somewhat by the time labor commenced, four days later.

Labor lasted eight hours, during which time the patient was in the greatest peril, and as soon as the os uteri had dilated sufficiently, the forceps were applied, and the labor ended. A slight tear of the perineum was immediately sutured. Following Dr. Fordyce Barker’s practice in such cases, I allowed a moderate hæmorrhage to follow the delivery of the child. The relief expected did not follow the birth of the child. The heart, though improved in tone, was laboring under many disadvantages. Blood pressure was at the minimum. The pulse as yet could not be counted. Respirations after delivery about 60 per minute while patient was asleep.

On the second day after delivery, elaterium $\frac{1}{10}$ th grain every eight hours, with acetate of potash instead of the bitartrate was prescribed. The kidneys had greatly improved in their action, though albumen remained in considerable quantity. The patient did not suffer in any way as a result of labor, except slight phlebitis of left arm and right leg.

On the sixteenth day after delivery, the patient, not having improved, and the symptoms of dilatation of the heart having increased, while the dropsy decreased, a consultation was decided upon, and Dr. N. G. West, of Leesburg, Va., was called in. He fully endorsed the diagnosis and treat-

ment instituted, and also agreed with me that the prognosis was grave.

On the seventeenth day, the patient was suddenly paralyzed on the right side of the body. I was immediately summoned to her bedside, and found her completely aphasic with glosso-labial paralysis and hemiplegia, as above stated. The dropsical condition of the patient, on the one hand, and the diseased heart on the other, rendered a differential diagnosis between serous effusion in the arachnoid cavity and embolism very difficult. The sequel rather supports the idea of serous effusion. I should also mention the absence of the characteristic spasmodic symptoms so often present in embolism.

The urgency of the case demanded prompt action, and acting upon the theory of serous effusion as the cause of the paralysis, I suggested venesection, which was done to the great gratification of the patient, taking nearly a quart of blood from her arm. As the blood flowed into the bowl, the condition of the patient improved, and she at once gave signs of comfort and relief. Her pulse could now be felt to have some regularity. Blood pressure was greatly increased. Improvement followed for a few days.

When the symptoms seemed to return, the digitalis no longer seemed of any service, and it became necessary to find a substitute. Having noticed the beneficial effect of tincture of *veratrum viride* in a case of irritable heart, in a diabetic patient, after digitalis had ceased to be of service, I determined to try it in the present emergency. Although the drug seemed to be contra indicated, it had a magical effect upon the heart and circulation. Tincture of *veratrum viride* (Norwood) gtts. iij, alternating with digitalis gtts. x, every six hours were used. I found the pulse 100, in twelve hours afterwards, and regular. Respiration correspondingly improved, and the patient expressed decidedly her belief that she would yet recover. Gradually her right side resumed its former strength, the muscles of the face resumed their functions, and lastly, her speech has become nearly natural. The muscles of the pharynx and tongue remain somewhat impaired. Albumen still is found in the urine, but is steadily growing less, and is now the only abnormal element present.

To test the effect of the *veratrum viride* upon the heart, it was on two occasions discontinued—on the third and fifth days, respectively, after its institution. Immediately the

loss was felt by the patient, and shown in irregular pulse and increased dyspnœa. The drug was gradually withdrawn in two weeks, and the digitalis continued.

Iron, quinine, strychnine and belladonna were administered from time to time during the progress of the case, according to indications.

The object of this article is simply to allude to the radical treatment employed in the use of venesection and veratrum viride, without either of which the patient must have perished. The use of veratrum viride is condemned by all authorities at my command, in all cases of weak heart. Indeed, some authors say it is to be given only as a cardiac depressant. That it is *merely a depressant*, I am unwilling to believe, although capable of it if largely given. If the fiat of our writers on therapeutics is to be accepted fully and without question, then every physician is in danger of becoming an automaton, and eclecticism a failure.

Correspondence.

"Syphilis and Virginia Cigarettes."

CHARLOTTESVILLE, VA., March 24, 1886.

Mr. Editor:—An editorial in the *New York Medical Record*, of March 13th, 1886, under the caption of "Syphilis and Virginia Cigarettes," gives a lecture on morals and hygiene for the benefit of "certain Southern tobacco firms," their employees and customers. The criticism on the harmful mode of advertising by distributing photos of some of their supposed female employees impresses me as being hypercritical and unjust—not only to a great Southern industry, but also to a class of defenseless and respectable females. I do not question the Editor's right or his ability to lecture on the moral as well as the hygienic aspect of the subject named; but with his high sense of morality, I am surprised that he ignores the greatest of Christian attributes. It looks very much like "straining at the gnat."

The *Record* is too respectable a journal to do an intentional wrong to a section, firm, or individual, and Dr. Shrady, the Editor, will doubtless correct the error into which he has been betrayed.

I learn the objectionable photos referred to in his editorial are not of *Southern girls*, as he concludes, who derive "commercial advantage from a display of their lower extremities and striped hosiery." The female employees of Southern factories represent a different class; they are modest, respectable, and striving for an honest living, as are their employers for fair profit and honest competition. The Southern patrons of the *Record* are at a loss to understand the animus of the article. Will you explain?

The readers of the *Record*, as your own patrons, desire more light on this subject.

Yours, very respectfully,
J. E. C.

[NOTE.—No one was more surprised than the Editor of the *Virginia Medical Monthly* to see such a causeless attack upon a peculiarly Southern industry in a medical journal that is usually so carefully edited as the *Medical Record*; and when our attention was called to the editorial in the issue of March 13th, we predicted that an ample retraction and apology would be expressed in an early number. We regret that the explanation, or attempt at apology, in the issue for March 20th, was not as magnanimous and as ample as one has a right to expect when an apology or retraction is really intended. We venture the assertion that in no city in the country is more care taken of the morals of the working girls in cigarette and other factories than in Richmond. In the principal factory in this city, the female operatives are not allowed to come to the factory until long after sunrise, and are required to leave in the afternoon in ample time to allow each one to reach her home by or before sundown. The wages paid are sufficient to prevent any of the girls from consenting to immoral acts because of abject poverty. The moral tone of the girl operatives in this factory is a continuous subject of commendatory comment by all who are acquainted with the facts. So cautious are the Proprietors in this respect, that a new comer into the working room has practically to be elected by those already in employment; and if even the tarnish of suspicion of immorality affects the

applicant for position, she is rejected. Such women are *not* liable to syphilis, and therefore the intimation that these girls while rolling the cigarettes might infect them with syphilitic or other venereal virus is groundless; and the assertion is injurious to a Southern industry which contributes almost as much as any other to meeting the general expenses of the Government. The editorial has the appearance of a sectional attack, which should not be countenanced in American medical journalism.]

Foreign Correspondence.

University Eye and Ear Clinics—Lucae's Mirror—Catheter for Aural Catarrh, etc.—Polyclinics and Classes—Lucae's Pressure-Probe in Chronic Middle-Ear Catarrh—Ear Washes—Trephining for Mastoid Disease—Hirschberg's Eye Clinics—His Aseptic Cautions—Helmholz.

BERLIN, GERMANY, March 3rd, 1886.

Mr. Editor,—Having had the good fortune to come here commended by friends and colleagues of my profession, I have had occasion to study the methods pursued in the eye and ear clinics with perhaps more exactness than falls to the lot of most students.

The University Ear Clinic is under the direction of Prof. Lucae. This clinic together with the Eye Clinic is held in a new building, facing the East, with windows practically of the same depth and breadth as the room. Daylight is used here also as the source of illumination; a lamp is, however, used on dark days or whenever it is necessary to make out the fundus of the eye with greater accuracy. Hand mirrors (concave and plain) are used for the reflection. Of peculiar advantage is the mirror of Prof. Lucae, the handle of which is held in the teeth and provided with one or two ball and socket joints so that it can be easily and comfortably adjusted to the eye. This is certainly more advantageous in performing paracentesis than holding the mirror in the left hand and steadying the speculum with the little finger of the same hand, as done by Schwartz.

Equally as much stress is laid on the use of the catheter in chronic and subacute catarrh of the middle ear, as in Halle. The injection of the warm salt solution through the Eustachian tube in cases of perforation from otitis media purulenta, is not done, nor is paracentesis so frequently performed as I have seen it in Halle. The catheter used is after Lucae, and the air is furnished by an ingenious pressure apparatus, in a continuous stream, which may be regulated at will by a catch adjusted to the conducting tube. The catheters are kept in boiling water, but before used are dipped in a three per cent. solution of carbolic acid, and wiped perfectly dry.

The catheter is here never introduced in the case of children, but instead the dry *douche* or the Politzer method is employed. The specula are also kept immersed in a three per cent. solution of carbolic acid.

The material for clinics is immense; in fact, there is too much for one to be able to examine many cases carefully. The Polyclinic lasts from 9 till 11 o'clock A. M., and from 11 to 12 o'clock, Prof. Lucae gives a private clinic. The word "private" over here merely signifies something outside of the polyclinic. Six or seven cases are demonstrated to a limited number of students who are carefully quizzed on the merits of the cases. One can understand thoroughly at least this much each day, and in a couple of months a vast deal of information may be thus acquired. Peculiar stress seems to be laid on the voice and tuning fork tests; the floor is marked off in metres so that the hearing power for the voice may be accurately determined and recorded.

I cannot refrain from mentioning the use of Prof. Lucae's pressure-probe in chronic middle ear catarrh. He attaches considerable importance to it as a therapeutic measure in such cases. The instrument is in shape like a probe, the ball of which is made of paper held in shape by some cement substance, I think collodion; and is concave so as to fit over the short process of the malleolus. The shank of the probe is inserted into the barrel shaped handle and moves backwards and forwards according as the pressure is made and relieved. The concavity is placed over the pro-

cessus brevis and pressure is made five or six times greater with the instrument held horizontally. I have not had occasion to convince myself of the utility of this method.

The solutions employed in otitis media purulenta are what may be found in the majority of ear clinics. Among them are chiefly chlorine water, lead acetate and boric acid. Chlorine water seems to be the favorite solution for granulations.

As regards the opening of the mastoid process, about the same method of procedure is employed as by Schwartz. Both the plain and the hollow chisel are used, but the classical point of attack is not so rigidly insisted upon. After the wound has progressed quite far in healing, and only a fistulous opening is left, lead drainage tubes are employed. I have also seen here, under the same circumstances, sticks of iodoform made up with cocoa-butter inserted.

Strict antisepsis is employed in all measures where the possibility of infection exists. I have generally observed that the probe is very little used as an aid to diagnosis. It is quite certain that the abuse of this instrument—even in skilled hands—may lead to harm.

It gives me great pleasure to heartily recommend the University Ear Clinic to those who wish to push the study of the ear to a higher point.

With regard to the eye, I have pursued with regularity the clinic of Prof. Hirschberg only. I think that with Prof. Hirschberg, the greatest advantages are offered of exact and careful study of eye diseases here. His course of lectures is arranged in a methodical and practical way and, added to this, the interest which he calls forth by his bright and scientific discourses constitutes one of the most beneficial and interesting features in the University. His operating room is a model of scientific care and accuracy. The floor and tables are of marble; the walls are painted with an oily substance which allows of their being washed with soap and water. Glass and porcelain are the materials of which the basins for instruments and disinfecting fluids are composed. The hands of all parties concerned in the operations are washed with soap and water and bathed with a sublimate

solution ($\frac{1}{1000}$). The instruments for operations on the ball lie in absolute alcohol; those for muscle and lid operations in a three per cent. carbolic acid solution. Cocaine and atropine are dissolved in $\frac{1}{5000}$ sublimate solutions, and a separate new bottle is used for each case. Prof. Hirschberg disinfects the conjunctiva by wiping it carefully with antiseptic gauze wet with a $\frac{1}{5000}$ sublimate solution, and instils one or two pipettefuls of the same solution over the wounds after the operations are finished. He never operates out of this room. Each patient has his own box of solutions, pencils, bandages, etc.

In a brochure which appeared in the *Berliner Klinike Wochenschrift*, Prof. Hirschberg has published his methods and his results since he adopted antiseptis or asepsis, and closes the article with the pregnant and familiar remark that asepsis consists in care, energy and scrupulous cleanliness.

There are many other eye clinics which, perhaps, would offer points as interesting as these mentioned, had I occasion to observe them as closely. Helmholtz, the discoverer of the ophthalmoscope still continues to lecture in the University. His portrait, in which he is surrounded by the inventions of his genius, hangs in the National Gallery of Art. It is to be regretted that I can only write you on two subjects, but these occupy my time and attention, and I sincerely hope that what has been recorded of what I have seen may be of interest and benefit as well to our general practitioners as to our specialists. I hope to write to you again from Paris.

Very Respectfully,

J. HERBERT CLAIBORNE, JR., M. D.

Mellier's Standard Elliot Patent Saddle Bags—

With a just appreciation of the tendency to general depression in values, and with a laudible desire to place what is a necessity to the outfit of many physicians, within the reach of all, the proprietors of "Mellier's Standard Elliott Patent Saddle Bags and Buggy Cases" have made a large reduction in prices of these articles, as can be seen by referring to their advertisement in this journal.

Proceedings of Societies, etc.

BALTIMORE GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY.

Regular meeting held February 9th, 1886, the President, George W. Miltenberger, M. D., in the chair; William E. Moseley, M. D., Secretary.

Diagnosis of Fibro-Cystic Tumor of the Uterus—Laparotomy and Supra-Vaginal Amputation of Uterus.

Dr. A. F. Erich read this paper: Mrs. A. McN., American, age 40 years, widow, entered the Maryland Woman's Hospital December 15th, 1885. Married when 19 years old; she has had no children nor abortions. She menstruated first when 13 years old, generally every four weeks. Amount usually small, and the duration four to five days. She is very anæmic. Five years ago she first noticed a hard tumor the size of a hen's egg in the lower portion of her abdomen. It grew rapidly during the first two years and a half; since then more slowly. It varied in size, and lately became somewhat smaller. Has had bloody discharge from her vagina, lasting six weeks, and has at times gone as many weeks without any discharge; and has frequently suffered from pains resembling labor. Her health has been gradually growing worse ever since she first noticed the tumor. Has also been subject to attacks of nausea, vomiting, and diarrhœa. Physical examination revealed a tumor the shape of an enlarged uterus, extending from the pubes to a little above the umbilicus, movable and continuous with the cervix uteri. The depth of the uterus, as measured with the probe, was five inches. Temperature, pulse and respiration normal. The consistency of the tumor being rather softer than that of a fibroma, the aspirator needle was introduced; about a fluid drachm of a colorless, serum-like fluid was obtained, which, upon microscopical examination (by Dr. Keirle), did not furnish any characteristic appearances that were calculated to assist in the diagnosis. The aspiration was not followed by any unpleasant effects. The diagnosis arrived at was intestinal fibro-cystic tumor of the uterus, adopting the definition as given in Professor Th. Billroth's *Handbuch der Frauenkrankheiten*, Band 1, Abschnitt III, Seite. 102, according to which all fibroid tumors that contain collections of fluid within their stroma are fibro-cystic tumors. These include lymphangioma, myoma telangiectodes

sarcoma cavernosum (Virchow*), and myxomyoma, of which latter Gusserow says (page 103 of Billroth's work, above quoted) that microscopically it would be difficult to distinguish this from sarcoma. The great danger of supra-vaginal amputation of the uterus (the only radical cure of the case) being fully stated to the patient, she elected to take the risk rather than to lead the life she had been leading. The patient being extremely anæmic, the palpebral conjunctiva being perfectly white, she was put upon a preparatory treatment, consisting principally of good food, iron and quinia, until, after the expiration of six weeks, she seemed to be strong enough to make a successful operation possible.

The operation was done February 1st, under all the usual antiseptic precautions, and occupied three hours. The abdominal incision made in the linea alba, extending from an inch-and-a-half above the pubes to the umbilicus, had to be extended to little over an inch above the umbilicus before the enlarged uterus could be rolled out. Both ovaries, considerably enlarged, rolled out with it. Finding the diagnosis verified, and no adhesions present, an Esmarch gum tube of the thickness of a little finger was tied firmly around the cervix as low down as practicable, including a considerable portion of the broad ligament. The greater portion of the uterus was then removed, taking care to leave enough of the cervix to prevent the gum tube from slipping. The broad ligaments were next secured by ligatures before they had time to slip from under the gum tube, which they are apt to do. As much of the cervix as could be safely removed was then trimmed out in the shape of a funnel, with thin edges. These edges were brought together antero-posteriorly by, first, a row of deep sutures to prevent bleeding, and second, a row of superficial sutures to bring the edges of the peritoneum in good apposition. Being unwilling to trust a mass ligature around so thick and rigid a stump as the remnant of the cervix presented, much time was spent in arresting hæmorrhage from the stump by the introduction of deep sutures. The rubber tube had to be loosened and tightened many times before all the bleeding points had been thus secured. The blood lost during the whole operation could not, however, have amounted to more than a few ounces. The vagina was then carefully washed out with bichloride of mercury solution, an opening made at the lowest point in Douglas' cul-de-sac, and a rubber drainage tube, provided with a cross-bar, and long enough to reach

* Geschwulstlehre III, p. 124.

from this space to the vulva, inserted. The vagina was filled with salicylated cotton, and the external opening of the drainage tube covered with the same material, in order to exclude the air. The abdominal incision was closed, in the now usual manner, deep and superficial silk sutures, and dressed antiseptically. Fully realizing the gravity of the operation, only such assistants as were absolutely necessary were admitted to the operating room, in order to make the risk from infection as small as possible. Professor Rohe administered the ether, and Dr. Clark, the resident physician, the three house students, Messrs. Lindley, Wise, and Robertson, with the matron, Mrs. Warner, all dressed in freshly-washed linen, were all that were permitted to be present. The subjoined pulse and temperature chart furnishes the subsequent history in a condensed form. Dr. Keirle's report of the necropsy gives as the cause of death, cardiac asthenia, and thrombosis, and says that the heart was so flabby as to flatten out of shape when laid upon the table. His report also shows that there was no secondary hæmorrhage; that the drainage had been efficient; and that septicæmia had been prevented, as shown by the absence of decomposing fluid in the abdominal cavity, the temperature and pulse changes, and the fact that a firm clot of blood was found in the heart and pulmonary vessels, while after death from septicæmia the blood is generally found of the consistency of tar. The manner of operating was that described by A. Martin, in his *Pathologie und Therapie der Frauen-Krankheiten*, with such modifications as personal experience suggested, or were made necessary by the conditions under which the operation was done. Martin places a ligature around the cervical stump, to which, with my experience with a cat-gut tourniquet in cervix operations, I felt I had no right to trust the life of the patient. As I was not able to procure a drainage tube provided with a cross-bar, as he describes, I was compelled to extemporize one by cutting a hole through a gum tube near its end, and then forming a cross-bar by splitting a small piece of the same tube and passing one of the pieces through the hole found at the upper end of the drainage tube. This piece, turned with its concave surface downwards, gave an opening on each side of the tube immediately under the cross-bar. The opening in Douglas' cul-de-sac for the passage of the tube was made by pushing the point of a uterine dressing forceps, with a boring motion, through the peritoneo-vaginal septum, from the vagina into Douglas' space, the fingers of the left hand being used to make counter-pressure. This instrument being so very blunt, the opening was made

without the loss of blood. The lower end of the tube was now seized between the blades of the forceps, and drawn down until its cross-bar rested upon the floor of the space. The necessity of the tube was made manifest by an almost constant dribbling of bloody serum during the first twenty-four hours. The tube was removed on the morning of the fourth day.

In reference to the condition of the abdominal cavity, Dr. Keirle reports: "There was no attempt at union of the abdominal incision, the lower half of which is discolored. The stump of the uterus is observed united by sutures and lymph. Injection with two-ounce glass syringe, nozzle introduced through cervical canal, does not, until after fourth trial, spirt in three fine jets through incision." Around the opening made for the drainage tube he found "a layer of lymph (fibrin) of irregular superficies, which extends thence on the pelvic peritoneum 2 c. m. area. Fibrin also agglutinates some coils of small intestines to uterine stump. This is a limited pelvic peritonitis. No further inflammation exists in the peritoneal cavity, in which the other organs and structures are normal."

The tumor was imbedded in the anterior wall and fundus of the uterus—the thickness of the anterior wall being six inches; that of the posterior only three-quarters of an inch. Weight of whole uterus and tumor, three pounds and eight ounces. Upon section, the tumor presented a pink-colored, transparent tissue, seemingly consisting of a delicate network of fibres and capillary vessels, separated by transparent fluid, looking very much like a section through connective tissue in œdema, and corresponding very nearly to a description of myxomyoma as given by Virchow. Dr. N. G. Kierle, the pathologist to the hospital, states: "Its* microscopic histology is that of the medium-sized spindle-cell sarcoma."

1st day—		6:30 P. M.—	Temp.,	96°F.	Pulse,	120.
		9:30 P. M.—	"	98°F.	"	108.
2d day—		10:00 A. M.—	"	101°F.	"	110.
		4:00 P. M.—	"	100°F.	"	114.
		10:00 P. M.—	"	101.6°F.	"	130.
3d day—		10:00 A. M.—	"	102.2°F.	"	120.
		4:00 P. M.—	"	100.8°F.	"	130.
		10:00 P. M.—	"	101°F.	"	114.
4th day—		10:00 A. M.—	"	103°F.	"	120.
		12:30 P. M.—	"	104°F.	"	150.
		2:30 P. M.—	"	104.8°F.	"	imperceptible.
		3:15 P. M.—	Death.			

* The microscopical examination was made after the case was reported.

Dr. W. P. Chunn asked Dr. Erich the character of the fluid withdrawn by aspiration;—Did it coagulate on exposure to air? He had always considered that if the fluid coagulated, it was a proof of fibro-cystic tumor, as the rule, to which he knew there were exceptions, was that fibro-cystic fluid was blood minus its corpuscles, and would coagulate when exposed to the air.

Dr. Erich answered that, as the amount of fluid obtained was very small, and as it was wanted for microscopical examination, he did not test its coagulability. The microscopical examination threw no light on the diagnosis.

Dr. T. A. Ashby would like to ask the Doctor what antiseptic method he had employed.

Dr. Erich replied that the ceiling, walls and floor of the patient's room were swept and washed, and then sprayed with a carbolic-acid solution. Only those required as assistants were permitted to be present, and all were dressed in freshly-washed linen, their finger-nails cut, and hands thoroughly cleaned. Carbolic-acid solution was used for instruments and a 1-to-2000 solution of bichloride of mercury for sponges, etc. The dressings for the abdominal wound were described in the paper.

Dr. Ashby said that opinions differ very widely among European abdominal surgeons in respect to the use of antiseptic agents within the abdominal cavity. While thorough Listerism, including the use of the spray, is enjoined by Mr. Thornton, all antiseptic agents are discarded by Mr. Lawson Tait. One fact is clear respecting the details of antisepticism—and that is, the great value of absolute cleanliness, which is the essence of Mr. Lister's teachings. Modern statistics show the great value of these principles in abdominal surgery, and he would indeed be a bold operator who failed to apply them, modified only as to details.

Dr. Chunn questioned the advisability of introducing a drainage tube in those cases where there were no adhesions and consequently no blood or fluid of any kind left in the peritoneal cavity. This opinion he based upon the teachings of Mr. Keith. He considered that if any fluid did collect in Douglas' space, it could be easily detected and gotten rid of. He was of the opinion that a woman of forty, with a growth like that shown, could be tided over until after the menopause.

Dr. H. P. C. Wilson questioned the report that some distinguished operators entirely ignored antiseptics. Some did not use the spray, but they were careful to see that all sponges,

instruments and appliances that had been used in an operation, were rendered thoroughly antiseptic before being used in another. Several acids, bi-chloride of mercury and other agents were antiseptic, and if any of them were used to guard against septicæmia those employing them could not be said to be opposed to antiseptics in abdominal surgery. He still had great faith in antiseptics, especially in hospital practice, and he favored the use of the spray in such cases, having it stopped only just before beginning the operation. He never could understand why we should be so careful in disinfecting sponges and not use as great precaution to render antiseptic the air around hospital operations. In one case, he did a laparotomy upon a patient at the same time that there was a case of erysipelas in the next room, and the result was uninterrupted recovery. At another time he removed an ovarian tumor from a woman who occupied the same room and bed-stead that had been vacated only ten days before by a patient having a sloughing fibroid from which the stench was so great that it was nauseating to enter the room and rendered the air of the whole floor offensive. In this room the carbolic spray was used liberally for several hours before the operation, and especially under, around and in the bed. In some cases he washes out the abdominal cavity with bi-chloride solution before closing the incision.

Dr. Ashby said he had not seen Mr. Tait operate, and so was not personally familiar with his methods; but Mr. Tait had published the fact that he had no faith in the so called antiseptic agents and believed they did more harm than good. At one time Mr. Tait practiced the Listerian ideas in all their details, but they disappointed him and he gave them up. He took water from the tap and put it into the basin for the sponges, over the instruments and into the abdomen, but he practiced the most rigid enforcement of cleanliness. Dr. Ashby had recently, through the courtesy of Dr. Chambers had an opportunity to examine Dr. T. G. Thomas' private hospital from cellar to garret. Every idea that prevails in its construction and management has reference to purity of air, scrupulous cleanliness and absolute comfort. But, with every modern convenience for ventilating, heating and lighting, Dr. Thomas still employed a thorough system of antiseptics and in every detail of his operative work. reference is had to disinfection and absolute cleanliness, Dr. Ashby expressed his opinion that, in our country at least, omission of antiseptic precautions in abdominal surgery would mean an increased death rate and that no sur-

geon could, in justice to his patient or to his own reputation, afford to hazard an operation within the abdominal cavity without using the methods of antisepticism that are expressed in the Listerian idea.

Dr. Ashby related the following case which was of interest in connection with the case reported by Dr. Erich. The patient was a negro woman, age 31, and had been married between nine and ten years. Her youngest child was about eight years old. For four or five years past she has lost considerable blood during menstruation and has noticed an enlargement of the abdomen, but attributed the latter to taking on flesh. For several months past, menstruation has been very profuse, generally lasting about eight days. During the inter-menstrual period, she has a discharge from the vagina of a clear watery fluid and ranging in amount from a teacupful to a pint in twenty-four hours. The discharge of fluid is spasmodic in character, deluging her clothing. Her general health is about par. Physical examination reveals a globular tumor about the size of a uterus at the fifth month of pregnancy. The tumor has thick, dense walls and is largest at its upper part. The cervix uteri is normal in size and feel. The sound enters the uterus five-and-a-half inches, is grasped tightly by the lower segment but rotates freely in the cavity near the fundus. Dr. Ashby's diagnosis is, a fibroid of the uterus undergoing cystic degeneration. The indications for treatment are palliative, as in the present condition of the patient no operative procedure would be justifiable. The case is of interest from the fact that the woman's health remains so good and that the cyst should have opened into the uterine cavity and allowed its contents to discharge as described.

Dr. W. E. Moseley thought one great source of misunderstanding in regard to antisepticism came from the inclination people showed to limit disinfectants to the so called antiseptic solutions and powders. Those surgeons who decry most loudly the use of antiseptic precautions are very careful to expose their sponges, etc., to a high degree of heat before using and thereby make use of the most powerful means of rendering them aseptic. Live or free, dry steam is found to be the most effective agent in disinfecting on a large scale. The numerous antiseptic preparations have their places, but many of them are almost or quite useless, unless used in very concentrated form, and others are poisonous or irritating and caution must be exercised in their application.

Dr. Erich said that in institutions having arrangements for disinfection by heat, much could be done by that means; but in our own hospitals he thought it necessary to have recourse to antiseptic fluids. If any question arose as to the diagnosis of the case reported, he would refer those present to Billroth's work. He thought many cases were diagnosticated fibro-cysts which were not really such, as for instance, one operated upon by himself, which proved to be an old abscess of a broad ligament. The rule laid down by authorities is, that fibro-cysts contain either blood, serum or lymph, and that the diagnostic value of coagulability of the fluid contents depended entirely upon the character of cystic degeneration. In the 70 cases of fibroid tumors collected by O. Hear only eleven contained fluid coagulating spontaneously. Whether the removal of a growth, the size of that shown, was justifiable procedure or not, the social position of the patient had much to do. A rich woman would have been able to endure the growth for a considerable time until the menopause, as she could place herself among the best surroundings and have proper care; but, in the case in hand, the woman was poor and obliged to earn her own living, which the growth prevented her from doing. In such cases, he thought we had no right to refuse to operate.

He considered the detection of a small amount of fluid in Douglas' cul-de-sac, unless encapsulated, an impossibility, as free fluid would recede upon the slightest pressure from without. The peculiar form of drainage he had adopted was that recommended by Martin, of Berlin, and had been used in several cases with the best results.

Dr. Erich considered it an advantage to have a slight rise of temperature after an operation as he thought it indicated a greater amount of vitality in the patient than if it had a tendency to remain sub-normal. With the closure of the peritoneal edges by the exudation of lymph, there must be some local peritonitis.

Regular meeting held March 9th, 1886. First Vice-President, H. P. C. Wilson, M. D., in the chair; Wm. E. Moseley, M. D., Secretary.

Ovariectomy during Acute or Chronic Peritonitis.

Dr. Paul F. Mundé, of New York, by invitation, read a paper on this subject, in the course of which he said: It has been my misfortune in my experience with the operation of laparotomy for abdominal tumors to meet with the most complicated and unfavorable cases. Thus, of sixteen double

ovariotomies, there were four intra-ligamentous cysts, three of which contained pus, and were not removable exactly by piece-meal; in two cases the walls of the cyst were practically rotten and so friable as to break down under the slightest manipulation. In one case there was a suppurating dermoid cyst with extensive adhesions to the bladder and pelvic wall; and in two cases previous rupture of the cyst, with the production of diffused chronic peritonitis had taken place. Adding to this latter category three cases of single ovariectomies during chronic peritonitis, in two of which the peritonitis was due to rupture of the cyst, and in the other to aspiration, and I have had five cases of ovariectomy performed during general peritonitis—one acute and four chronic. Certainly this array of complications does not forecast a high rate of recovery; and in reality it stands at 50 per cent. of double ovariectomies. But I have the satisfaction of knowing that one patient recovered after operation during chronic peritonitis; one after removal of a suppurating dermoid cyst with lesion of the bladder and catgut suture; one after removal of a multilocular cyst weighing fifty pounds—all double ovariectomies—and one after partial incision of a huge cyst of the broad ligament, containing forty-eight pints. Of my single ovariectomies nearly all recovered.

But it is not my object to report here my results in ovariectomy (I must wait until the number of my cases has greatly increased before it is worth while to do this), but to relate very briefly the cases in which I have been so unfortunate as to have presented to me conditions for which I deemed it my duty to operate, and still in which the chances for recovery were next to nothing. I think that from a consideration of these cases some practical deductions for future guidance may be gathered. At all events, I hope to elicit valuable hints from the discussion.

I feel it but just to myself to state that in operating upon these, often really desperate cases, I have been actuated by the rule, very properly, as I think, laid down for his own guidance by Dr. Goodell—never refuse to operate in any case which in his opinion offered the slightest chance for the recovery of the patient. And, with him, I have thereby no doubt greatly injured my statistics of recovery. But as we usually learn quite as much, if not more, from our failures than we do from our successes, I do not hesitate to report the five cases of ovariectomy during peritonitis, only one of which recovered, feeling that I have nothing to reproach myself for, either in venturing to operate or in the after-treatment.

As to the justifiability of immediate removal of any ovarian cyst during peritonitis, acute or chronic, as soon as the existence of the latter condition is discovered, there can probably be no question, since the brilliant results of Keith, Freund, Veit, Tait, and many others, in operations of this kind. Some of the apparently most desperate cases have recovered after removal of the ovarian cyst and drainage.

The peritonitis may be due to two causes—first, the inflammation and mortification of the cyst: and second, its rupture and the escape of its contents into the peritoneal cavity. And it is on these two points, the diagnosis of the cause and presence of the peritonitis, and the treatment of the cyst contents effused into the peritoneal cavity, that I desire to direct attention more particularly.

(1) The cause of the peritonitis may be either accidental rupture of the cyst, by violence or spontaneously, the cyst walls having become inflamed or friable by torsion of the pedicle, outside violence, or without known cause. Or, a not unfrequent occurrence, aspiration or tapping of the cyst may have excited inflammation of the sac or peritonitis.

The *diagnosis* of acute peritonitis, in such cases, is based on the general principles on which that condition is recognized. Subacute and chronic inflammation of the peritoneum, however, are more obscure, and can be suspected or clearly discovered chiefly by a rise of temperature, with morning and evening exacerbations, a dry, furred tongue, quick, small pulse, general depression—in fact, symptoms similar to those characteristic of typhoid fever. There is some tenderness over the abdomen, which is, of course, distended if an ovarian cyst is present, but the distention is not so prominent and ovoid as is usually found with that disease. The occurrence of rupture of an ovarian cyst may be surmised by the statement of the patient that at some period, more or less remote, a sudden pain was experienced in the abdomen, as though something had given way, and thenceforth she had diffused abdominal pain, fever, and general prostration; further, from the appearance of the abdomen, which is flat, while distended, simulating ascites, with tympanitic resonance over the prominent positions and dulness in the flank, which relations do not change, or but slightly, on the patient assuming the lateral decubitus. If it were ascites, the area of dulness and resonance would change on altering the position; but the thick ovarian fluid does not shift so easily as the watery ascitic discharge. Besides, there is a boggy, doughy feel of the whole abdomen, differ-

ent from either ascites or ovarian cyst, and similar to œdema of the abdominal parietes. The umbilicus, which is usually somewhat prominent in ovarian tumors and ascites, remains flat if thick ovarian fluid is scattered among the intestines. A wave of fluctuation is usually not perceptible, or very indistinct, after rupture of an ovarian cyst, unless the fluid is very thin. Per vaginam, only a very diffuse, indistinct sense of resistance is felt in the vaginal vault. On bimanual examination, no distinct cyst with firm, elastic walls is felt; but the experienced diagnostician will detect a flaccid, yielding, boggy mass in the abdomen, which varies in dimensions in accordance with the time allowed the cyst to refill since the last rupture. Only practised touch will recognize this peculiar sensation, and appreciate its relation to the general condition of the patient.

(2) The *treatment* of an ovarian cyst, complicated by chronic peritonitis, be the latter due to aspiration, or to rupture of the cyst, is laparotomy—removal of the cyst and cleaning of the peritoneal cavity so far as possible, followed by drainage. There can be no doubt as to the justifiability of this practice. Too many operators of the highest eminence have adopted it, and its success, as a whole, has warranted their action.

But as to the treatment of the contents of the cyst, which were effused into the heretofore presumably healthy peritoneal cavity, there exists some difference of opinion. While, *eo ipso*, the only correct treatment would seem to be the immediate careful removal of *all* the noxious contents of the ovarian cyst from the peritoneal cavity by sponging and irrigation, experience seems to show that drainage will in course of time entirely and safely remove the ovarian fluid (which is often colloid—that is, thick and glutinous), and that no harm accrues to the system by allowing this usually irrigating matter to remain in prolonged contact with the peritoneum. In explanation of this apparent incongruity, it should be noted that the peritoneum doubtless has, by chronic inflammation, become proof against fresh irritation. My experience warrants me in stating the belief that it is safer to leave the gradual elimination of the effused ovarian fluid (be it thick or thin) to the medium of the drainage tube than to attempt to remove it manually (if it be stringy and colloid), by prolonged careful sponging, or by copious antiseptic irrigation of the abdominal cavity. I cannot but think that the traumatic irritation of the first procedure, and the shock following the irrigation of so large a surface as the intestino-

peritoneal area by an antiseptic lotion (particularly the bichloride) are more injurious and hazardous than to allow free, voluntary drainage through a tube. I am impelled to this conclusion by the result of a case operated on by Lusk during the past year (reported to me by Polk, who was present at my fourth operation of this kind, and who concurred in the treatment), and another reported by Max Runge (*St. Petersburger Med. Wochenschrift*, 2d Jan., 1886), in both of which rupture of the cyst took place, an enormous quantity of thick, yellow-stained matter was found in the peritoneal cavity, which was removed gently so far as possible; the cavity was then drained, and recovery took place. In Runge's case, colloid matter was discharged from the drainage tube as late as the fortieth day after operation. That the dangers of fresh septic infection, of relighting the subacute peritonitis, and, above all, of seeing the patient die from shock, stare the operator in the face in such cases, can unfortunately not be denied. It is a question simply of leaving the patient to a certain and lingering death, or of giving her the chance of recovery by an operation the results of which have been often most favorable. My own individual results should be no criterion, since my cases have been exceptionally difficult and unfortunate. After these preliminary remarks, which attained a length quite unintended, I will give a brief report of my five cases of ovariectomy during peritonitis.

Case I.—Æt 33, single. Nov., 1885; apparently unilocular cyst; abdomen exceedingly tense. Operation refused. In order to gain time and relieve tension, aspiration with fine needle, under antiseptic precaution. The chocolate-colored fluid was removed. About a week later high temperature, and symptoms of subacute peritonitis. Ovariectomy. Nov. 14th, patient with pulse 120, temperature 99.5°F., exceedingly prostrated. Cyst entirely removed; peritoneum studded with flocculent lymphatic adhesions and deposits. Drainage. Death on sixth day, from pyemia, the right parotid gland showing probably metastatic enlargement and supuration. Earlier operation might have saved this case.

Case II.—Mrs. F., 44 years, multipara; large, apparently solid tumor. Operated on March 10th, 1881. Colloid matter escaped on opening peritoneal cavity. A large multilocular tumor adherent to bladder and intestines. Fully fifty ligatures were applied, and thorough syringing was resorted to. No drainage. Recovery without a bad symptom. Weight of tumor, thirty-five pounds.

Case III.—Miss S., 38 years, single, was seen by me in Sept., 1883. Lived in a farm house in New Hampshire, seventeen miles from Hanover. Evidently in a septic condition. Double ovarian tumors. Advised removal as last desperate chance. Accepted. Day appointed for operation about one week later. Drove out with assistants, and found patient greatly weakened by vaginal hæmorrhage the night before. I discountenanced the operation, but she insisted upon it. Pulse 130, temperature 102°. On opening abdominal cavity, gush of colloid and purulent matter; general chronic peritonitis. Right tumor largely adherent; left, intra-ligamentous, rotten, and removed only by piece-meal. Death of patient while inserting abdominal sutures.

In this case I should never have consented to operate but for the urgent request of the patient, and the fact that I had come so long a distance to do the operation. Had the second tumor not been intra-ligamentous, and so difficult of removal, I firmly believe that I could have at least removed the patient from the table alive.

Case IV. This was the most interesting and instructive of all my cases. The patient was a multipara, who in Aug., 1883, had a fall on the abdomen, and then noticed an abdominal enlargement, with severe pain, both of which had increased since. The abdomen was found, in March, 1884, when I first saw her, to be flat, with projecting sides, dull on percussion, indistinct fluctuation, which remained unaltered on changing the position of the patient. On the right side, a loose, flaccid mass could be felt. Aspiration was performed, but nothing was obtained. On the left side, deep in the pelvis, was found a tumor the size of a cocoanut, with tense walls. Diagnosis of rupture of ovarian cyst of right side (probably colloid, on account of absence of fluid by aspiration) and of intra-ligamentous cyst of left side was made, and early operation advised. But as patient still felt pretty well, she decided to wait. Three weeks later, she returned very much worse, and desired immediate operation. Temperature 103°. On opening the peritoneal cavity, colloid, stringy matter escaped in enormous quantity, and it required careful manual efforts to remove even a semblance of all the effusion, which reached from Douglas' pouch to the diaphragm. It seemed to me, and to those who assisted me, imperative to remove as much of this supposed toxic material as possible; and I finally decided to irrigate the abdominal cavity with a 1-to-1000 solution of corrosive sublimate, with the patient on the side. The colloid matter came

from a cyst of the right ovary, as diagnosed three weeks before the left cyst was enucleated, and proved to be full of foetid pus. The colloid matter removed weighed thirteen pounds. The highly prostrated patient died of shock twenty-two hours after operation.

I feel fairly confident that if I had allowed the colloid matter to find its way out of the peritoneal cavity gradually through a drainage tube, under proper antisepsis, the patient would have stood a far better chance of recovery, as did those of Lusk and Runge.

Case V.—Mrs. K., 47 years, one child 28 years ago, was brought to me on the 1st of this month for an abdominal swelling and great prostration, dating only five weeks back. I found a well nourished, but cachectic-looking woman, whose abdomen was but little distended, but in whom I could detect, on careful bi-manual examination, a flaccid tumor of the size of an adult head, on the right side. Percussion resonant except on the right side. Considerable diffuse abdominal pain. Diagnosis, apparently growing ovarian cyst. Indication, speedy operation on account of cachexia. On March 3d, while stooping, sudden abdominal pain and collapse. Temperature 102.2° , pulse small and thready. Operation having already been fixed for March 14th, was now performed; on the contrary, the indication for speedy operation seemed increased by the recent urgent symptoms. Feel and appearance of abdomen changed since last examination; tumor less distinct, and in centre. On opening the abdomen, gush of evidently ovarian fluid in large quantity; peritoneum highly congested, and covered with recent lymph deposits, certainly much older than eighteen hours (date of pain, etc., day before). Tumor found to be of left ovary; was very friable, and certain loculi contained pus, which escaped into the peritoneal cavity while the mass was being removed; small pedicle. Thorough sponging, but no irrigation of peritoneal cavity. No shock. Drainage. Symptoms of peritonitis on second day. Temperature 102.8° (above which point it never rose). Obstinate vomiting, in spite of absolute discontinuance of nourishment or medication per os; and death yesterday morning—that is, on the fourth day. But very little bloody serum escaped through the drainage tube.

I confess that when I decided to speak on this subject before this Society, I hoped and believed that I had every reason to expect this patient to recover. But although sorely disappointed, I feel that I have not been to blame,

and that but for the uncontrollable vomiting (which, of course, was reflex from the peritonitis), the patient might have recovered.

I have not come before this learned Society to offer advice, but merely to bring before it my experience in this particular class of ovariectomies, with the hope of learning some points from the gentlemen present which may aid me in improving my record of recoveries in cases complicated by acute or chronic peritonitis.

Dr. T. A. Ashby asked Dr. Mundé if he had had any experience with cases in which the cyst contents had been poured into the peritoneal cavity as the result of accidental rupture of the cyst wall, and still no unfavorable result had followed? He thought this was an exceptional way in which nature deals with certain cases—the cyst wall being accidentally ruptured by some violence, and the cyst contents effused into the peritoneal cavity. Being of an irritating character, it was absorbed and eliminated. He referred to a case reported by Dr. I. E. Atkinson, of this city (*Med. Med. Jour.*, Vol. IV, p. 229). This case was one of a cyst within the abdomen, diagnosed as *probably* ovarian; *possibly* of the broad ligament. The tumor had reached the size of a pregnant uterus at the seventh month, when it ruptured, and its contents were poured into the abdominal cavity. The growth had not returned at the time the case was reported.

Dr. B. B. Browne said that after the rupture of the cyst, in Dr. Atkinson's case, there was discharged a large amount of fluid from the bladder, and the question arose whether, from chronic peritonitis, the cyst had become adherent to the wall of the bladder, and ruptured directly into that viscus, or the contents had escaped into the abdominal cavity, and had been taken up and passed off by the kidneys. The patient made an uninterrupted recovery.

Dr. W. P. Chunn felt comforted by Dr. Mundé's remark, that it was not necessary to sponge every particle of effused fluid out of the abdominal cavity, as the drainage tube could be depended on for its ultimate removal. He referred to a case upon which he operated, and in which some of the cyst contents—a thick, sticky fluid—even after careful sponging, had to be left in the abdominal cavity. A drainage tube was used, with a good result.

Dr. H. P. C. Wilson thought the position taken by Dr. Mundé was the correct one, that if there was the least chance of saving a patient's life, we were in duty bound to give her that chance without considering what our record might be.

He did not consider the cutting into an abdominal cavity involved in general peritonitis as desperate a procedure as had been supposed. As bearing upon the subject he related the following case: A woman was sent to him, by a skillful physician, for the removal of a cystic tumor of the ovary. The patient was about 38 years old, the mother of seven children, the youngest 2 years old. She reported that she had never had a day's sickness in her life, and this was confirmed by her physician. There was no abdominal tenderness. A careful examination by himself and Dr. R. T. Wilson left no doubt in their minds that the case was one of simple ovarian cyst. Under antiseptic precautions, including the spray, Dr. R. T. Wilson opened the abdomen when one-and-a-half gallons of greenish yellow fluid escaped. The case proved to be one of general peritonitis, with a circumscribed peritoneal dropsy, the fluid being confined to the lower front part of the abdomen, and the cavity was formed by agglutination of the intestines with adhesions of the omentum and layers of lymph. The patient made a good recovery. He would not hesitate to cut for an ovarian tumor because of the presence of acute or chronic peritonitis. He agreed with Dr. Mundé that the abdominal cavity should not be sponged out more than is absolutely necessary and very gently.

With regard to washing out the abdominal cavity with antiseptics, he would say that, in a case in which he made an exploratory incision with the view of removing a kidney, he found a fibro-sarcoma of such dimensions and adhesions that the operation was abandoned. It was necessary to use drainage, and two soft rubber tubes were placed by the side of the tumor and the incision closed. Bi-chloride solution (1 to 2000) was injected through one tube, and allowed to run out through the other, twice daily for several days until the incision being nearly healed and the water coming away clear, the drainage tubes were removed, and the patient was considered out of danger. On the eleventh day symptoms of tetanus set in, and the patient died on the 17th day. Dr. Wilson thought the antiseptic had nothing to do with the patient's death and that had it not been used she would have died of septicæmia.

In a case which was sent to him as a simple ovarian cyst, and which he considered such, the patient, shortly before the time appointed for operation, upon trying to rise from her bed, felt a sharp pain, followed by collapse; subsequent examination showed that the tumor had disappeared. The

patient made a good recovery and has had no return of her trouble.

Dr. W. E. Moseley would consider it wiser in all cases, where the cyst contents found their way into the peritoneal cavity, to remove as much as practicable of the fluid. He would not favor violent sponging, as much harm might be done in that way, but he thought a great deal would be accomplished by irrigating the abdominal cavity. He had seen this resorted to by Dr. T. A. Emmet and did not think any untoward results could be attributed to its influence in any case he had the opportunity to study. He would not be willing to use a 1 to 2000 solution of bi-chloride of mercury in this free manner within the peritoneal cavity as, however carefully it was drained out, the large amount of surface would retain a considerable amount of the fluid, and poisonous effects ensue. He thought that water freshly boiled in covered vessels and used directly from them, at about the body temperature would be thoroughly aseptic and would be as effective in every way, and devoid of the irritating properties of bichloride solution. His experience warranted him in speaking with no great degree of positiveness, but his predilection, in cases of colloid, or purulent material, would be in favor of careful irrigation as described—with the use of the drainage tube, if necessary as an adjunct.

Dr. P. F. Mundé was satisfied that in many cases cysts ruptured into the abdominal cavity and their contents were absorbed without any peritonitis resulting. In one case reported by Dr. T. G. Thomas, rupture had taken place several times, temporarily delaying operation. In one of Dr. Mundé cases, a small tumor, the cyst had ruptured and had never filled again. He had also ruptured a small cyst intentionally without bad results. Dr. Noeggerath had reported that he had ruptured small ovarian cysts in several instances with good results, as had also Dr. Polk, of New York.

As to just what character of fluid was irritating to the peritoneal surface we had no positive knowledge, but probably the most irritating was the thick, tenaceous, so called colloid material. He did not wish to convey the impression that he disapproved of carefully sponging the abdominal cavity except in cases where there was present a thick colloid material which would require an excessive amount of manipulation and even a decided scraping for its removal.

He thought Dr. Moseley's remarks were very pertinent. The case in which he had irrigated the abdominal cavity with solution of bi-chloride of mercury (1 to 2000) was oper-

ated upon some three years ago, when our knowledge of the deleterious effects of this antiseptic was much less perfect than at present. Of late he has always spoken against the use of the solution stronger than 1-5000 or 1-10000 in irrigating any large cavity. He thought the warm freshly boiled water was much safer than bi-chloride solution, and equally effective in washing out the peritoneal cavity. He considered that the cases reported by Runge, Lusk and others and referred to in his paper demonstrated the fact, that, in those cases where the cyst contents were of a thick tenacious character, the drainage tube was the proper treatment, and only moderate, careful sponging should be employed.

Extrusion of Fœtal Membranes at Seventh Month with Subsequent Retraction.

Dr. F. E. Chatard, Jr., reported the following case: Mrs. B., second pregnancy. Up to March 7th, the thirty-third week nothing unusual occurred. On that date, I was hurriedly summoned and obtained from the husband the following data.

Mrs. B. had that afternoon taken a walk of considerable length, and decidedly more than was her custom. As a result she felt more than fatigued and complained of a sense of weight and fullness about the genitals. Her husband, who was of rather inquiring turn of mind, made an examination and found a purplish mass protruding from the external genitals. He at once directed her to keep quiet in bed and sent for me. I saw her about three hours after her walk, and in making an examination found protruding from the labia a soft fluctuating tumor, about the size of a small chicken egg. This could be traced by the finger within the vagina, and extended up to and within the external os uteri which was dilated to about the size of a silver quarter dollar. The tumor was nearly cylindrical in shape, moderately tense, contents perfectly fluid, with walls about the thickness of the membranes at term; there was no apparent uterine contraction at the time of my visit, no pain, and the sensations complained of immediately after the walk had almost entirely disappeared. I directed her to remain quiet in bed and if labor pains came on to check them with an anodyne mixture of chloral and morphia, as she was still within six weeks of her expected date of confinement. At my visit the next morning I learned the patient had passed a comfortable night, had experienced no pains or uncomfortable feel-

ings, the tumor had retracted so that the lower portion was about half way between the os uteri and the external genitals; directed continued rest in bed. On the third day, I found the tumor projecting only slightly at the mouth of the womb, which was then contracted to about the size of a three cent piece. On the fourth day the os had returned to its normal size and condition, and no membranes could be felt; the patient completed her term of pregnancy and was confined on April 11th. The labor was normal—the bag of waters forming as usual.

The point of interest presented by the case is the extreme distension of the bag of waters at this early date, and its subsequent gradual and steady retraction until it returned to its normal situs within the uterine cavity. This, coupled with a corresponding steady contraction of the dilated os, and the continuance of the period of gestation, makes a unique case. The distensibility of the membranes has abundant clinical demonstration at term, and immediately preceding the rupture of the bag of waters by the efforts of nature; but the retractility is not often made so manifest, though the possibility of such power has been demonstrated by the researches of Barr, Remak, Vulpian and others. Their investigations have proven the existence of two layers of the amnion—an internal or epithelial layer, and an external one composed of connective tissue, more condensed as it approaches the epithelial layer, and of more striated muscular fibres; thus we can explain the phenomena which, in the present case, is demonstrated clinically. At the same time, the history of the case conclusively proves that a marked degree of dilatation of the os, with corresponding protrusion of membranes by no means necessarily results in immediate or proximate completion of the uterine effort, if we can by any means arrest further expulsive action. In fact, the presentation of the bag of waters, as here described, may be considered as indicating laxity of the membranes and feebleness of contraction of some duration—a condition offering the best chance of successfully arresting the progress of a threatened premature labor before rupture of the membrane occurs.

Dr. F. E. Chatard, Sr., had never met with a case similar to that reported. He had always considered that any considerable protrusion of the membranes made speedy labor inevitable, and he had always acted in accordance with that idea. He now recognized that his reasoning had been wrong, and thought the case of great interest as showing to what an

extent extrusion of the membranes could take place, and still the labor go on to full term.

Dr. A. F. Erich said that, so far as his experience went, the case reported was unique. He suggested that the membranes were forced out by contractions of the uterus, and the subsequent relaxation of that organ allowed them to retract to their original shape. All cysts have a tendency to assume the spherical form. He thought this a more plausible explanation than that it was due to contractility of the membranes.

Dr. Mundé, so far as his experience and reading went, considered the case unique. He was inclined to think that Dr. Erich's theory better accounted for the facts, than those brought forward by Dr. Chatard.

Dr. Ashby said the case reported must be one of extreme rarity; he had never met with any similar case, but recalled a case which had been recently reported which was perhaps more remarkable in some respects than Dr. Chatard's. The case was reported to the Chicago Gynecological Society, January 13th, 1886, by Dr. H. T. Byford, and occurred in the practice of Dr. C. R. Parke. A discharge of the liquor amnii took place; labor pains came on and the umbilical cord prolapsed. Dr. Parke replaced the cord and gave ergot. As labor did not progress, he gave morphia and the pains ceased. Three months subsequently the patient gave birth to a living child. Dr. Ashby considered this case unique in character and, but for the well known reputation of the gentleman who had reported it, he would feel inclined to question the correctness of the observation.

Dr. P. C. Williams thought it very difficult to believe that there could be a rupture of the foetal membranes sufficiently large to permit a prolapse of the cord, and yet pregnancy go on for any considerable time. Such a rupture must be central, must needs lead to complete draining of the amniotic fluid and be speedily followed by labor. He had often seen cases in which the "waters" would escape during the recumbent position, but would cease soon as the patient resumed an upright position. In these cases he supposed the rupture was slight and near the *fundus uteri*. Whether the explanation was correct or not the fact remained, that the amniotic fluid might, under certain circumstances, escape in considerable quantities and yet the pregnancy not be arrested.

Dr. H. P. Wilson referred to case in which there was a pretty constant discharge of the amniotic fluid for two weeks before labor.

Dr. L. E. Neale thought the presence of muscular fibres in the membranes would sufficiently explain their retractility; and as this explanation was given by such authorities as Tarnier, Chatrenil (1882) and Charpentier (1883), it was worthy of consideration.

Analyses, Selections, etc.

New Method of Passing Stricture of Urethra.

Dr. Willis P. King, of Sedalia, Mo., in the *St. Louis Courier of Medicine*, for March, 1886, describes an extemporaneous method of enabling the physician to pass a urethral sound or catheter in cases of urethral obstruction or stricture, which our readers may find well worth remembering. So far as Dr. King knows, the method is entirely original with him, and he has successfully adopted it in the only two cases in which he has had occasion to try it. The method, briefly stated, consists in passing a small flexible catheter into the urethra down to the seat of stricture, or obstruction, until it will go no further. Then affix the nozzle of a suitable syringe, filled with water, to that end of the catheter which is outside the penis; and after sufficiently compressing the head of the penis with the thumb and finger, to prevent regurgitation of the fluid, inject the water into the urethra. This injection will sufficiently dilate the stricture to allow the catheter, with slight pressure, to pass through it into the bladder. In the want of a syringe, the mouth may be filled with water, and similarly squirted through the catheter with the same effect. After the catheter has thus made its way into the bladder, it may be withdrawn, and a proper-sized catheter, sound or divulsifier, immediately introduced. He reports two cases—one of his own boy-baby, ten months old, whose urethra was obstructed by the pressure of a perineal abscess, which abscess resulted from a retrocession of measles. The child had not urinated for thirty-six hours, although catheterization had been skilfully attempted by a medical friend. Dr. King passed a rubber catheter down to the obstruction in the membranous portion of the urethra, where it stopped. He took a mouthful of water, and putting his mouth over the end of the catheter, and using it for a syringe, gently and

steadily forced the water into the catheter—at the same time holding the urethra close to the catheter with the left hand, while he gently presses down the catheter with the right hand. The water opened up the way, and the catheter passed into the bladder, and a stream of urine flowed out, to the instant relief of the patient. The operation was repeated regularly until the abscess burst—thus relieving the constriction of the urethra. The other case was that of a friend, who had two urethral strictures as a result of gonorrhœa years before. Under an eminent surgeon, the first stricture, three inches from the meatus, was partially dilated, but he could not enter the second stricture, which was just anterior to the prostate. The operation of urethrotomy was declined by the patient. The urine came away only in drops, and oftentimes only after relaxation of the sphincter ani, when he came under Dr. King. After etherization, Dr. King tried to pass a No. 2 bougie, but failed. Larger instruments could not be entered. The filiform instrument belonging to Gouley's divulsor also failed. Then he introduced a No. 6 silver catheter down to the stricture, attached the nozzle of a rubber syringe, filled with water, to the end of the catheter, and holding the urethra tightly around the catheter, he forced the water through the catheter into the bladder. After doing this forcibly and rapidly two or three times, he followed the passage of the water by gently pressing the end of the catheter toward the open space between the thighs. *The catheter passed into the bladder.* He then withdrew the catheter, and passed Gouley's divulsor and divulsed the stricture. The after-treatment was as usual.

Book Notices.

System of Practical Medicine by American Authors. Edited by WILLIAM PEPPER, M. D., LL. D., Provost and Professor of Theory of Practice of Medicine, and of Clinical Medicine, University of Pennsylvania, etc. Assisted by LOUIS STARR, M. D., Clinical Professor of Diseases of Children in Hospital of University of Pennsylvania. Volume IV: "Diseases of the Genito-Urinary and Cutaneous Systems—Medical Ophthalmology and Otology." Philadelphia: Lea Brothers & Co. 1886. Leather. 8vo. Pp. 877. (From Publishers.)

In notices of the three preceding volumes, we have sufficiently expressed our appreciation of the merits of this "System of Practical Medicine" to induce all readers whom

we can influence to possess themselves of it. The descriptive portion of the above title shows the range of subjects considered in this volume. We find in the department on "Diseases of the Genito-Urinary System" treatises on some conditions not usually noticed in works on Practice—such as Abortion, by Dr. Engelman; Disorders of Pregnancy and those connected with the Menopause, by Dr. Jaggard; Diseases of the Vagina and Vulva, by Dr. Jenks; Diseases of the Ovaries and Oviducts, by Dr. Goodell; Diseases of the Uterine Functions, by Dr. Reeve, etc. In short, some 300 or more pages are distinctly devoted to those diseases of the female which are usually relegated to works on Gynæcology. For convenience of reference, the subject of Myalgia, by Dr. James C. Wilson, Progressive Muscular Atrophy, by Dr. Tyson, and Pseudo-Hypertrophic Paralysis, by Dr. Mary Putnam Jacobi, are treated in this volume. Our limited space does not allow us the opportunity to make any critical remarks, nor even to speak more fully of the scope of this excellent book. But we may add that this volume is fully the equal in authoritative importance of either of the preceding ones, and makes the series of the "System" thus far issued invaluable to the student and practitioner.

Text-Book of Ophthalmoscopy. By EDWARD G. LORING, M.D.
New York: D. Appleton & Co. With Plate. 8vo. Pp. 267.

This book, the work of one of the best known ophthalmologists in the country, is thoroughly exhaustive of the subject. One hundred and ninety-four pages are devoted to the explanation of the ophthalmoscope and its application, the anatomy of the fundus oculi, the determination of the refractive errors with the ophthalmoscope or ophthalmoscopic optometry, and the diagnosis of diseases of the refractive media, etc., of the fundus oculi. To this is added a long appendix of 73 pages, explanatory of ordinary principles of optics and refraction, with a description of the various forms of the ophthalmoscope in use. Four colored chromo-lithograph plates, with fourteen illustrations, accompany the volume, which is otherwise profusely illustrated with wood-cuts explanatory of the text. Without attempting any analytical criticism of the work, which our want of space forbids, we would still say that the accuracy of detail evidenced by every page of the book, and the thoroughness with which the subject is ventilated, shows the profound knowledge and the wide experience of the author. Whilst not a book that the

ordinary practitioner has daily use for, it would be a valuable addition to any medical man's library, and invaluable to any one who has frequent need for the ophthalmoscope.

W.

Handbook on the Diseases of the Nervous System. By JAMES ROSS, M. D., F. R. C. P., LL. D., Senior Assistant Physician to the Manchester Royal Infirmary, etc. 8vo. Pp. 726. 184 Illustrations. Cloth, \$4 50; leather, \$5.50. Philadelphia: Lea Brothers & Co. 1885.

We have examined this book with interest and profit. It more nearly fulfils the wants of a full *text-book* on nervous diseases than any other of recent publication. It opens with a general description of the nervous system—anatomical and physiological—which is aided greatly by the wood engravings. Then the general morbid anatomy and physiology are considered, which opens the window to give light to such subjects as general symptomatology, diagnosis, and treatment. Having secured the general information desired, the special diseases are taken up one by one and considered mostly from a clinical standpoint—beginning with general diseases of the peripheral nerves and disorders of common sensation and of special sense. From first to last, there is a systematic progression in the arrangement of the work, which makes it as valuable for the student as we can suppose such a text-book to be made. For the practitioner it is an excellent diagnostic and therapeutic book. A good index facilitates prompt references to subjects.

Diagnosis of Diseases of the Brain and of the Spinal Cord. By W. R. GOWERS, M. D., F. R. C. P., Assistant Professor of Clinical Medicine in University College, etc. New York: Wm. Wood & Co., 1885. 8vo. Pp. 293. (From Publishers).

This December number, 1885, of "Wood's Library" contains Dr. Gowers' Lectures as recently delivered at University College Hospital, London. They present the latest advanced views of authorities on the subjects treated of, and a number of his own original suggestions are given with his peculiar force and clearness of style which becomes wonderfully instructive to most readers. One at all interested in nervous diseases cannot afford to be without Dr. Gowers, contributions recently made to neurological literature. This book is about the clearest in description and one of the most accurate in the detail of facts regarding the diseases of the brain and spinal cord that has ever been published.

Manual of Auscultation and Percussion. By AUSTIN FLINT, M. D., LL. D., [Late] Professor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, etc. Fourth Edition. Thoroughly Revised and Enlarged. Philadelphia; Lea Brothers & Co. 1885. Cloth 12mo. Pp. 280. (From Publishers.)

This, the last finished work of the renowned author whose obituary appears in this number, is devoted almost exclusively to the "physical diagnosis of diseases of the lungs and heart, and of thoracic aneurism." It is *the* authoritative book, *par excellence*, on the subjects of which it treats. The author, in making this revision of former editions, added greatly to the value of this edition by introducing illustrative drawings, in order to show to the eye the exact location of organs, etc. It is needless waste of space to enter into a detailed description of a work whose title is a statement of its importance to every practitioner, and whose author was the recognized teacher of the world on such subjects.

Atlas of Clinical Microscopy. By ALEXANDER PEYER, M. D., Translated and edited by ALFRED C. GIRARD, M. D., Assistant Surgeon, U. S. A. First American, from Manuscript of Second German Edition, with Additions. Ninety Plates, with 105 Illustrations, Chromo-Lithographs. New York: D. Appleton & Co., 1885. Royal 8vo. Pp. 194. (For sale by West, Johnston & Co., Richmond.)

This work fills a want long felt by practitioners in this country—especially those interested in the microscope. It teaches how to make the microscope useful in practice—the purpose of the volume being, as a means of diagnosis, to represent by plates, chromo-lithographs, etc., the microscopic appearances of diseased tissues or producers of disease as they are accepted at the present day by good authorities. After being once examined, it seems strange that such an aid to diagnosis had not been popularized heretofore; and now that we have the book, we do not see how we could do without it. This work will sell itself after its excellent plates are examined in connection with the descriptive text accompanying them.

Essentials of Vaccination. By W. A. HARDAWAY, M. D., Professor of Diseases of Skin, Post-Graduate Faculty Missouri Medical College, etc. St. Louis: J. H. Chambers & Co. 1886. 12mo. Pp. 146. (From Publishers.)

Dr. Hardaway deserves the thanks of the profession for presenting this pains-taking and accurate "compilation of

facts relating to vaccine inoculation, and its influence in the prevention of small-pox." The value of this work is specially to be recognized at this time, when much of the other literature on animal vaccination is so scattered through the journals as to be inaccessible to the general reader. The author discusses with fairness all the prejudices for and against animal vaccination, and sums up, as the sole disadvantage, "the lack of proper supervision over its cultivation." The book is valuable to every practitioner of medicine."

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

Improved Self-Retaining Nasal Speculum. (From *Med. News*, Dec. 6, 1885.) By JOHN N. MACKENZIE, M. D., Baltimore, M. D. 1 page.

Report of Thomas Wilson Sanitarium for Children. Dr. WILLIAM D. BROOKS, Physician in charge. Baltimore, Md. Pg. 25.

New Clothing Case for the Soldier. By THORNTON PARKER, M. D., Newport, R. I. (From *Jour. Amer. Med. Asso.*) Pg. 4.

Cocaine in Hay Fever. By SETH H. BISHOP, M. D. (From *Jour. Amer. Med. Asso.*) Pg. 13.

Physiological Effects of Massage. By BENJ. LEE, Philadelphia. Pg. 46.

A Sea Change. By Dr HORATIO R. STORER, Newport, R. I. (From *Med. News*, Oct. 17, 1885.) Pg. 4.

Progress of Electrolysis in Surgery. By Dr. ROBERT NEWMAN, New York. (From *Gaillard's Med. Jour.*) Pg. 8.

Value of Cocaine in Nose and Throat Surgery. By Dr. FRANK DONALDSON, Baltimore, Md. (From *Trans. Med. and Chirurg. Fac. Md.*) Pg. 8.

Hay Fever—Its Etiology and Treatment; With Appendix of Rare Cases. By Dr. MORRELL MACKENZIE, London, Eng. (From *Amer. Jour. Med. Sciences*, Oct., 1885) Pg. 17.

[OUR want of space crowds out a number of book notices that had been prepared for this issue. They will appear in our May number.]

VIRGINIA MEDICAL MONTHLY,

[ESTABLISHED APRIL, 1874.]

RICHMOND, VA.

SUBSCRIPTION, \$3.00 per annum.....SINGLE COPIES, 30 cents.

LANDON B. EDWARDS, M. D.....EDITOR AND PROPRIETOR.

Original Contributions solicited from all sections; but the Editor does not hold himself responsible for the views of authors.

Articles contributed to the pages of this Journal must not be duplicated in other journals by the author without proper credit being given to the Virginia Medical Monthly.

Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

Goodell on Laparotomy.

We have before us a reprint (from *Medical News*, Jan. 30, 1886), entitled "A Year's Work in Laparotomy," by Dr. Wm. Goodell, of Philadelphia. The contributions of this distinguished surgeon rarely fail to awaken interest, and we think this last is especially interesting, as it shows that the comparatively large mortality after laparotomy by American surgeons is a coincidence, and not a consequence of defects in their operative procedures. It is not uncommon for operators in other fields of surgery to have a succession of recoveries out of all proportion to the average mortality of the operation; and, on the other hand, the death rate may be excessively large without a rational explanation. If such was not the case, American surgeons would doubtless feel very much humiliated, as they have not been able to obtain the good results in abdominal surgery, reported by Tait, Wells, Keith, Thornton, Battey, etc. This has been a subject of comment and regret, if not of mortification, and we learn with pleasure of Dr. Goodell's achievements, which bear favorable comparison with those published by the most successful of the Trans-Atlantic surgeons. Forty-four laparotomies were done, with forty recoveries. Ovariectomy was performed 28 times, with 2 deaths; oöphorectomy 9 times 1 death; hysterectomy 2 times, 1 death; exploratory incision 4 times, no death; pelvic abscess 1 time, no death.

Only one death was due to septicæmia, although all but seven were operated on in hospitals.

Some of the cases presented all possible complications. Adhesions of a most formidable character were often met with, and in one case mentioned, more than thirty ligatures were used. Out of 28 cases of ovariectomy, in 21 there were adhesions. No case was rejected as unfit for operative interference.

In commenting upon the adhesions, Dr. Goodell remarks: "The only way that I can explain why the proportion of cases with adhesions is so much larger than in those reported by European operators, is that physicians in this country are not yet educated up to the idea of an early performance of the radical operation; and the women themselves not only put off the evil day, but they often insist on being tapped—an operation which is very likely to be followed by adhesions." Our failure to appreciate the importance of early operative interference also, we think, accounts for our greater mortality. Certainly this is true as regards ovariectomy. The removal of a non-adherent ovarian tumor is easily accomplished, and is attended with an astonishingly small risk; but only those who have encountered them can appreciate the terror of cases, for example, like one reported by Dr. Goodell, which, he says, "was so universally adherent to intestine, womb, bladder, liver, and stomach, that he did not have a square inch of unattached surface." The bladder in this case was torn; a drainage tube had to be used; and yet this patient recovered. The only wonder is that any such get well.

Dr. Goodell thinks the danger incident upon the escape of the cyst contents into the peritoneal cavity is much overrated. It has happened so often with him that he ceases to care about it, and only takes greater pains to sponge out thoroughly the cavity of the peritoneum. Monsel's solution of iron, he thinks, "can be applied with impunity to large oozing surfaces. But there must be a redundancy of the fluid, and it should be applied either by the tip of the finger wetted with it, or by a small sponge well squeezed out."

In seventeen of the cases, both ovaries were removed. In all cases in which there is a suspicion of disease, or where the patient is near the climacteric, he adopts this rule, because in two cases he had to remove the remaining ovary years afterwards.

Dr. Goodell's experience leads him to consider all papillomatous cysts "benign until the subsequent history de-

termines otherwise;" but he remarks that "malignancy occasionally lurks insidiously in the most benign-looking cysts. In two of his cases epithelial cancer occurred in the cicatrix.

He uses the ordinary knot and the Staffordshire knot indifferently; cuts through the umbilicus instead of going around it; includes the recti muscles and all the tissues in the sutures; and while not a "very firm believer in the spray part of antiseptic surgery," he used the anatomizer in every case but one, and that "patient did as well without it as most do with it."

We think the point cannot be too often reiterated, that the earlier the operation the fewer and the less firmly organized will be the adhesions met with, and the better the results.

Virginia State Board of Medical Examiners.

A meeting of this Board will be held at the Exchange Hotel in this city on Wednesday, April 7th, at 10 A. M. Candidates for the practice of medicine in Virginia will be examined, and business relating to the interest of the Board will be transacted.

We understand some changes in the form of examination will be proposed. The first and most important will be the addition of sections on gynecology and ophthalmology. As it is now, questions on these branches have to be asked at the expense of the sections on obstetrics and surgery—both of which are too important to be in the least curtailed. It will probably be claimed that gynecology and ophthalmology are taught in many schools as side issues, by lecturers and not professors. A knowledge of this fact is what has impressed some members of the Board with the importance of elevating these branches to the dignity of separate sections. By doing so they hope to bring about a reform in medical education to that extent, and to sustain their own reputation as reformers. It may also be claimed that cases in the fields of gynecology and ophthalmology are consigned by the general practitioner to the specialist; but many cases are not accessible to, and have not the means of going to those specially skilled in these departments, and incalculable harm is often done through a failure to recognize early the cases which require special treatment. The Board will place itself upon a high plane if it demands that all of its licentiates must be especially well qualified in all departments.

It will also be suggested to substitute the definite and suggestive term *morbid anatomy* for the vague and unlimitable

term "pathology." The sense in which the profession uses the term pathology is not borne out by the meaning of the Greek word *pathos* (παθος), a disease, and *logos* (λογος) a discourse. A discourse on disease, as Dunglison defines it, is "the branch of medicine whose object is the knowledge of disease." Quain says "it is the name generally accepted for the science of disease, but the subjects which it may include cannot be exactly defined."

We are pleased to note the increased professional interest, at home and abroad, in the practical working of this important means of elevating the standard of medicine; and no less marked is the confidence shown by the intelligent people throughout the State as they become better informed as to the real mission of the Board. We think every member of the medical profession should feel it incumbent upon him to further enlighten the people upon this point, and never let them lose sight of the fact that the benefit is mutual.

American Medical Association.

The Thirty-Seventh Annual Session will be held in St. Louis, Mo., on Tuesday, Wednesday, Thursday and Friday, May 4, 5, 6, 7, commencing on Tuesday at 11 A. M. The Delegates receive their appointment from permanently organized State Medical Societies, and such County and District Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States. Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one Delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; *provided*, however, that the number of Delegates for any particular State, territory, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association.

"The Chairman of the several Sections shall prepare and read, in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections."

Practice of Medicine, Materia Medica, and Physiology.—Dr. J. T. Whittaker, Cincinnati, Ohio, Chairman; Dr. B. L. Coleman, Lexington, Ky., Secretary.

Obstetrics and Diseases of Women and Children.—Dr. S. C.

Gordon, Portland, Me., Chairman; Dr. J. F. Y. Payne, Galveston, Texas, Secretary.

Surgery and Anatomy.—Dr. Nicholas Senn, Milwaukee, Wis., Chairman; Dr. H. H. Mudd, St. Louis, Mo., Secretary.

State Medicine.—Dr. John H. Rauch, Springfield, Ill., Chairman; Dr. F. E. Daniel, Austin, Texas, Secretary.

Ophthalmology, Otology, Laryngology.—Dr. Eugene Smith, Detroit, Mich., Chairman; Dr. J. F. Fulton, St. Paul, Minn., Secretary.

Diseases of Children.—Dr. W. D. Haggard, Nashville, Tenn., Chairman; Dr. W. B. Lawrence, Batesville, Ark., Secretary.

Oral and Dental Surgery.—Dr. John S. Marshall, Chicago, Ill., Chairman; Dr. A. E. Baldwin, Chicago, Ill., Secretary.

A member desiring to read a paper before Section, should forward the paper, or its *title and length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements, at least one month before the meeting.

Committee of Arrangements.—Dr. Le Grand Atwood, St. Louis, Mo., Chairman.

PROPOSED AMENDMENTS TO BY-LAWS.—*By Dr. Foster Pratt, Mich.*—Each Section shall nominate its Chairman and Secretary—all other nominations to be made, as now, by the Nominating Committee.

By Dr. I. N. Quimby, N. J.—Create a new Section, to be known as the Section on Medical Jurisprudence.

WM. B. ATKINSON, M. D., *Permanent Secretary*,
1400 Pine St., Philadelphia, Pa.

Graduates of Medical College of Virginia.

The annual commencement of this Institution was held at the Richmond Theatre, March 30th, and the following are the graduates: Charles A. Ayers, Texas; Walter D. Belt, Pittsylvania county; Richard D. Cunningham, Richmond; John N. Dox, Nelson county; Cassius Lee Cudlipp, Richmond; J. Claude Elsom, Nelson county; James W. Elsom, Richmond; Roscoe E. Franklin, Suffolk; Cassius W. Hore, Prince William county; Lawrence Ingram, Manchester; George T. Latham, Lynchburg; William Meredith, Hanover; Julian A. Norfleet, Southampton; Sydney M. Robinson, Carroll county; William F. Smith, Richmond; John L. Smith, Grayson county; R. L. Townes, Petersburg.

The Faculty Prize was awarded to Dr. Latham, for the best thesis. Other Faculty prizes were awarded to Drs. Claude Elsom, Cunningham, Robinson, and to Mr. Corey (undergraduate) for anatomical specimens. The prize (case of

clinical thermometers) of the firm of Purcell, Ladd & Co., who are always alive to the interests of the medical profession of this State, was awarded to Mr. George W. Archer, of Richmond, for the best essay on "The Use and Care of the Thermometer." Rev. Dr. W. W. Landrum, of the Baptist Church, of this city, delivered a well considered address on "The Ministry of Medicine." Governor Lee, in awarding the prizes, said he always "believed imagination had much to do with the healing of any affliction." Drs. E. A. Morris, G. T. Latham and N. F. Smith were appointed Resident Physicians to the City Alms House. Dr. Sidney M. Robinson was recommended for Resident Physician at the Confederate Soldiers' Home, near this city.

The Virginia Pharmacy Law.

The Legislature of Virginia passed on March 3d, 1886: "An Act to incorporate the Virginia Pharmaceutical Association, and to regulate the practice of Pharmacy, and to guard the sale of Poisons in the State of Virginia."

The first section of this act names the incorporators, and declares that the Association shall not hold at any one time real estate in excess of ten thousand dollars in value.

Section 2d states that the object of this Association is to unite the pharmacists and druggists of the State for mutual aid, encouragement and improvement, to encourage scientific research, develop pharmaceutical talent, to elevate the standard of professional thought, and ultimately restrict the practice of pharmacy to qualified pharmacists and druggists.

Section 3d provides that after the passage of the act, no other than a registered pharmacist shall retail, compound or dispense medicines or poisons unless such person shall employ and place in charge of said pharmacist, or store, a registered pharmacist. But quinine, Epsom salts, castor oil, paragoric, sweet oil and such domestic remedies and proprietary articles as are usually kept by retail dealers may be sold by merchants. In such cases the sale of laudanum, morphia and proprietary medicines must be sold in the original packages as obtained from the wholesale druggists.

Section 4th provides that graduates of any college of pharmacy recognized by the Pharmaceutical Association, and clerks who have had three years' experience in putting up prescriptions, in stores where physicians prescriptions are compounded, or those who have passed an examination before the State Board of Pharmacy, are eligible to be registered.

Section 5th provides for the creation of the Board of Pharmacy, composed of five pharmacists from different sections of the State, who are appointed by the Governor, each member of the Board to serve respectively one, two, three, four and five years, but the Secretary must be elected to serve for five years, and shall be paid a salary. The Board must meet and organize within thirty days of the act, and elect a President and Secretary, having first qualified on oath before the Clerk of the court where they reside. The Board is empowered to transact all business relating to the legal practice of pharmacy; to examine into and adjudicate upon all cases of abuse, fraud, adulteration, substitution or malpractice, and to enforce all the provisions of the law, and to report all violations to the proper State authorities. Any one examined by the Board shall pay a fee of five dollars. Three members are a quorum. It is the duty of the Board to register and examine all persons who can establish their claims in accordance with the provisions of the law.

Section 6th provides that persons claiming the right to registration must, within ninety days after the organization of the Board, show to the satisfaction of the Board that they have had not less than three years' experience in the preparation of physicians prescriptions, and in compounding and vending medicines and poisons; but this does not apply to any one in business on their own account at the time of the passage of this act.

Section 7th provides among other things that the fee for registration of proprietors shall be two dollars, and for clerks one dollar. The salary of the Secretary shall be fixed by the Board, and paid out of the fees received, as are all the expenses of the Board. Each member of the Board is to receive five dollars for every day that the Board is in session, and also travelling expenses, going and coming.

Section 9th forbids the sale of powerful poisons, all of which are enumerated, unless the name of the purchaser, the date, name of the poison, and for what purpose wanted, are registered in a book kept for the purpose—this book to be always open for public inspection. But nothing here applies to the preparation of physicians prescriptions by a registered pharmacist or practicing physician.

Section 11th provides that any person violating any of the requirements of this act, shall, on conviction, pay a penalty of twenty-five dollars for each offence.

Section 13th provides that registered pharmacists are exempt from doing jury duty.

The following experienced pharmacists compose the Board who met in Richmond and organized March 25th, 1886:

T. ROBERTS BAKER, Richmond, *President*; E. R. BECKWITH, Petersburg, *Secretary*; J. W. THOMAS, JR., Norfolk; ROBERT BRYDON, Danville; EDGAR WARFIELD, Alexandria.

The Board will meet in Alexandria on the 11th of May, at the time of the annual meeting of the State Pharmaceutical Association, to act upon applications for registration.

Superintendency of the Southwest [Va.] Lunatic Asylum.

We are gratified to learn through recent correspondence that the common desire of the people and the profession is that Dr. Harvey Black, of Blacksburg, Va., shall be Medical Superintendent, aided by Dr. Robert J. Preston, of Abingdon, Va., as Senior Assistant Physician. Knowing both of these gentlemen as well as we do, we have no hesitation in endorsing the selection as the best that could be made under the circumstances. Dr. Black's ability as an alienist is established in professional esteem; and his management of the Eastern (Va.) Lunatic Asylum, until corruptly displaced by reason solely of his political preferences, made that institution a model one, until it fell into the control of those who sought office rather than to do good. Dr. Preston is a gentleman of marked professional ability, whose modesty perhaps is his greatest fault. The office seeks these gentlemen, and it is to be hoped that they will consent to serve in them.

Mr. T. Roberts Baker.

In calling attention to the advertisement of Mr. Baker, we would remind the reader that this gentleman, who is the successor of the late well known firm of Meade & Baker, is a graduate of the Philadelphia College of Pharmacy; has been second and first Vice-President of the Va. State Pharmaceutical Association, of which he is now the Corresponding Secretary; was, on the organization of the State Board, March 25th, elected President of that body. His House, which was established in 1856, has always maintained an enviably reputation for strict business integrity, and for keeping and dispensing only pure and reliable medicines. He imports direct from the New Foundland fisheries his pure Cod Liver Oil in casks; and his proprietary articles, such as his *Carbolic Mouth Wash*, *Andalusian Balm*, *Saponine Dentifrice*, and several other preparations, have a wide reputation based upon their intrinsic merits.

Rates to Delegates to the American Medical Association.

The rates given to the Delegates to the American Medical Association meeting, May 4th, in St. Louis, have been fixed by the different Railroad Companies of the country at one and one-third fares for the round trip. Delegates must pay full fare coming, and will receive, on application, from the Agent at starting point a certificate, which, when signed by the Chairman of the Local Committee of Arrangements, will entitle him to the reduced return rate. No reduced return ticket will be issued unless the purchaser can show a certificate issued by the Agent from whom he purchased the going ticket, and signed by the Chairman of the Committee of Arrangements, LeGrand Atwood, M. D.

Practice for Sale.

We call attention to the advertisement on page 10, in front of the reading pages. We know the party well, and the property and the good-will are cheap at the price he names.

Obituary Record.

Dr Austin Flint

Died at 2 o'clock Saturday afternoon, March 13th, 1886, of cerebral apoplexy. The attack lasted only about fourteen hours, during all of which time he was unconscious. After dinner on Friday he attended a consultation, and then went to a meeting of the Faculty of Bellevue Medical College. He then seemed in his usual health, and, although somewhat weary, did not start for home until after 4 o'clock. At midnight the nurse who attends Mrs. Flint heard a cry from the Doctor's room, to which he had gone a few minutes before. He had fallen on the bed unconscious. Dr. E. J. Janeway was summoned, and seeing at once the nature of the attack, he sent for Dr. Austin Flint, Jr. Every effort was vainly made to restore him to consciousness. Dr. Isaac E. Taylor and Dr. William T. Lusk were called into consultation Saturday, but despite their efforts Dr. Flint sank slowly, with no sign of returning consciousness. Only the three attending physicians and the younger Dr. Flint were at the bedside when he died, Mrs. Flint being an invalid.

For forty years Dr. Flint has stood in the front rank of his profession. He came of a family that had made a name in medicine in Massachusetts from the earliest settlement of that part of the country. His ancestor, Thomas Flint, of Matlock, Derbyshire, England, settled at Concord in 1838. Dr. Edward Flint, the great-grandfather of Dr. Flint, was a phy-

sician of note in the Massachusetts colony in the early part of the last century, and his grandfather practiced medicine at Leicester, Mass., longer than most men live, dying there when past ninety, in 1850. He had thrown aside his profession to enter the ranks of the Revolutionary army, but before the Revolution ended his services were demanded as a surgeon. Dr. Flint's father, Joseph Henshaw Flint, was also a surgeon who was known far beyond the territory in which he practiced. He lived at Northampton and afterwards at Springfield.

Dr. Austin Flint was born at Petersham, Mass., on Oct. 20th, 1812. His collegiate studies at Amherst and Harvard were followed by a full course in the Harvard Medical College, from which he was graduated in 1833. From the beginning of his career he made himself known, both by his success as a practitioner and by his contributions to medical periodicals. The first three years of his professional life were passed at Northampton and Boston. In 1836 he went to Buffalo, where he remained until 1844, his prominence at that time securing him a call to the chair of Institutes and Practice of Medicine at the Rush Medical College, Chicago. After a year of that life he returned to Buffalo, where he established the *Buffalo Medical Journal* in 1846, which he conducted for ten years. Meanwhile he was increasing his usefulness in various directions. He was one of the three founders, in 1847, of the Buffalo Medical College, at which until 1852 he occupied the chair of the Principles and Practice of Medicine. Then he went to the Louisville University, holding the same chair in that institution, where he remained until 1856, when he went back to Buffalo as Professor of Pathology and Clinical Medicine. While still holding a residence at Buffalo, he passed the Winters of 1858, 1859 and 1860 at New Orleans, where he was Professor of Clinical Medicine in the University of Louisiana, and was also visiting physician to the Charity Hospital. He changed his home toward the close of this engagement to New York where he has since remained. In 1861 he became one of the physicians to Bellevue Hospital, and was appointed to two Professorships—the Principles and Practice of Medicine and Clinical Medicine at Bellevue, and Pathology and Practical Medicine at the Long Island College Hospital. He remained always with the Bellevue Faculty, but his duties forced him to sever his connection with the Brooklyn college in 1868. In 1872 he was elected President of the New York Academy of Medicine, from which he resigned during the past Winter because of the professional differences that have lately been

agitating the regular physicians, Dr. Flint having sided with his son in rigid adherence to the precepts and practices of the regular school. His connection with medical and scientific organizations was wide-spread, including most of the leading medical societies. He was a correspondent of many similar European societies. His connection with the old organizations which adopted the new medical code sanctioning consultations outside of the regular school was severed, and he was an "association" rather than a "society" physician of late. In 1884 he was President of the American Medical Association, and his name was on the rolls of the County and State Medical Associations from the time they organized.

As an author, Dr. Flint did much for the profession. His "Treatise Upon the Principles and Practice of Medicine," published in 1866, has run through seven editions. Dr. Flint was engaged during the past Winter in revision work for another edition. The sales of these books have been phenomenally large, reaching nearly 40,000 copies. A work on "Clinical Study on Heart Sounds in Health and Disease," which he wrote in 1852, received the first prizes of the American Medical Association in 1852 and 1859. His works cover a wide field, and are regarded as standard on the subjects of which they treat. In 1876, he was a delegate to the International Medical Congress at Philadelphia, where he delivered an address on "Medicine," which is regarded as the most masterly of its kind. He attended the Congress at London in 1881 and at Copenhagen in 1884, and had been chosen President of the next Congress, to be held at Washington in 1887. During the Winter he was accorded the honor, never before received by an American physician, of an invitation to address the British Medical Association on "Medicine" at its coming meeting. The invitation had been accepted, and he intended to go to Europe in July for this purpose.

Dr. Flint had been feeling uncommonly well this Winter. His work at Bellevue College, which he regarded as the crowning work of his life, interested him as much as ever, and he undertook with the zest of younger days the revision of his famous book. At the same time he kept up a very large practice and permitted himself to be frequently called in consultation cases. His contact with scenes of death made him dread a lingering illness, and a wish that he might be taken suddenly when his time came was often expressed by him. He had no family except his wife, whom he married in 1835, and his son, Dr. Austin Flint, Jr.

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RICHMOND, MAY, 1886.

Original Communications.

ART. I.—**The Relations Between Disease of the Skin and Disorders of Other Organs.*** By L. DUNCAN BULKLEY, A. M., M. D., etc., New York, N. Y.

That the skin may become diseased idiopathically, and quite independently of other organs, as may any other portion of the body, is a fact which all are ready to accept; all are acquainted with the local diseases of the skin exhibiting hypertrophy, and new formation, as also the conditions produced by the invasion of parasites, and the simple inflammations of the skin arising from many causes.

But all are not equally ready to admit the very close and intimate relations which sometimes exist between certain diseases of the skin and disorders of other organs. Indeed, local pathology has been carried so far by some observers as to almost ignore such a possible relationship, and comparatively little is found on the subject, either in the text-books or in current literature. No very close observer, however, of any very considerable number of cases, for any length of time, can fail to be struck—occasionally at least—with a

* Read before the New York County Medical Society, March 22d, 1886.

concurrence of symptoms on the skin and elsewhere in the economy, which is certainly not fortuitous, but which, if carefully studied, may often be found to stand in the relation of cause and effect, or at least which may both be due to the same fundamental cause. In many instances these will be found to occur together or in alternation, in such a manner that even the casual observer is impressed with a relationship between the two.

The subject is altogether too large and important to be considered in a single paper, but I shall endeavor to present certain points for consideration, which I trust will serve to introduce the matter, and to indicate the direction in which our discussion may profitably be directed.

As illustrative of the conditions under consideration, and introductory to our subject, I wish to present in brief a letter recently received from a most intelligent and observant patient—a young lady, aged 24—who has been under my care, off and on, for a number of years, with both acne and eczema. I may add that this letter suggested the idea of presenting the matter on this occasion. I will quote the illustrative portions of the letter in the language of the writer, she writing from a distant State. She says:—

“The eczema of my hands still continues, but I am at present even more troubled by a chronic red nose, which has been afflicting me for months past, and has lately gotten much worse. My nose is not constantly red, but is subject to sudden and severe hot flushes, during which the blood seems to rush to my nose, inflaming and heating it to such an extent that it fairly throbs and burns. These attacks come on after meals, on going out of doors and returning to the warmer rooms, on approaching the fire, or on bending my head, as at prayers in church. But they are not confined to such moments—being liable to occur at any time, and during any occupation. The other afternoon, as I was sitting quietly reading, at about 5 o'clock, *suddenly* I felt the burning and tingling, and I knew before looking in the glass that my nose had become of a fiery, startling red; and yesterday in church, which was of an ordinary temperature, during the sermon, it suddenly heated up in the same way. The inflammation generally lasts a long time—an hour or more—though sometimes not so long. Last night, as I was

lying awake in bed, it grew hot and throbbing again without apparent cause. These attacks have become so frequent that it now seems to me that my nose has become permanently slightly red.

"My general health is not very good. I am troubled with constant cold hands and feet; and at the same moment when my nose may be burning, my feet will be icy. I have tried friction, plunging them in cold water, changing my stockings, and many remedies to stir up my circulation; but the reaction never lasts more than a few moments, and then they are again as cold as before. My eyes are also nearly always swollen and heavy, and I have a constant dull headache, which very seldom leaves me.

"I am greatly troubled with sleeplessness, lying awake for hours every night. Although I retire at half-past 9 or 10, I often cannot get to sleep before 1 or 2 o'clock, and when I do sleep, the slightest noise will awaken me, and then I lie awake again. My brain seems to be on the alert all night long, so that though physically very tired when in bed, I cannot get rested.

"In the morning I am always tired, and more worn out and headachy than when I went to bed. I feel as if I could hardly drag myself about. If I go for a walk, my clothes seem to weigh me down, and at all times my dresses, even the oldest and loosest, seem too tight for me, and oppress me. I am greatly constipated, but occasionally have a slight diarrhoea, though I take no medicine.

"My monthly periods seem to be retarded lately; instead of the four weeks, which is usual with me, I now go for five weeks and over between the times.

"I forgot to mention that I occasionally have terrible night headaches. I wake in the night with a pain so severe that I cannot raise my head from the pillow, and confidently expect to be unable to rise the next morning. But by morning the severity of the pain has worn off, and I rise with only my usual dull headache. These night pains are rare, but the suffering is intense when they do come.

"I am also subject to a slight nausea on first rising in the morning. This has lasted for months, and I occasionally have it in the night.

"I have a good appetite, and eat heartily for lunch and dinner; I never have eaten much for breakfast. I eat no pastry, fried or greasy food, or cake, nor any hot bread, except Southern corn-bread, which is very light.

"I used to spend much of my time studying, but have

given it up lately on account of my swollen and heavy eyes, and headaches. If there is anything which I ought not to eat, either on account of my salt-rheum or this redness of the nose, please tell me.

"I would like to ask you, too, whether there is anything that can be done to lessen the odor of the perspiration. I am very cleanly about my person, having all my life taken a cold bath every morning (not in the tub), and a hot one once a week. I change my under-clothes every day, and wash with carbolic soap and ammonia; but this odor seems lately *very* strong."

This letter presents a clinical picture which, with a little care, may be observed almost daily in practice, and such cases speak volumes against a narrowness of specialism which would recognize the local disease of a single organ, and fail to discover the bearings of general medicine in the case. Would any one attempt to say that the skin troubles, the acne rosacea, the eczema, and the bromidrosis in this case had no connection with or relation to the general and other symptoms mentioned? Would any one really expect to give permanent relief to the skin disorders by local means alone, without in any way remedying any of the derangements of the other organs, as detailed? It is, indeed, necessary to have broad views and sound general knowledge in order to successfully treat diseases of the skin.

We will now consider more closely some of these relationships which can so often be observed.

In our present study, it is recognized that the skin, as an organ, may become idiopathically affected, as mentioned at the beginning; but it is also distinctly claimed that even in many of those diseases commonly recognized as local, such as lupus, the parasitic affections, and others, the eruption is greatly influenced by the condition of the patient and the performance of the various functions. In syphilis, also, it is often of the greatest importance to carefully study the general condition of the patient. Many of the elements to be hereafter mentioned may at times so affect the individual that specific medication may even act prejudicially.

It is, however, mainly in the great groups of glandular diseases and of inflammatory, or exudative diseases of the

skin, including eczema, acne, urticaria, psoriasis, lichen, pemphigus, and others, that we observe most markedly the relations between the skin disease and disorder of the organs, and to this class of eruptions the subsequent considerations principally refer.

Our subject may be best studied under a number of heads, although clinically it may often be difficult to differentiate them with exactness, and not unfrequently many of the conditions may be found coincidently, and may have a concurrent action. We will consider the relations between diseases of the skin and—

1. Digestive disorders.
2. Nervous disorder or disease.
3. Circulatory disorders.
4. Sexual disorders or diseases.
5. General conditions, as anæmia and debility.
6. Special conditions, as malaria, gout, and rheumatism.

I. DIGESTIVE DISORDERS.—The most striking illustration, familiar to all, of the connection between digestive disorders and diseases of the skin is found in the case of *urticaria*. Not only do we see acute attacks of eruption excited by eating indigestible substances, but we see the disease kept up and repeated by a disordered digestion; and it not unfrequently happens that a chronic urticaria, especially in children, may be broken up by the administration of castor oil, repeated daily for some length of time, while acute attacks vanish permanently when an emetic is given soon after the ingestion of irritating articles of food.

Next to urticaria, *acne* stands prominent as exhibiting often a close dependence upon digestive disorder. In a recent analysis of a large number of cases of acne, it was found that in considerably over half the cases the evidence of digestive disorder was striking; and in a very considerable proportion it was remarked that the condition of the eruption varied very greatly, according to the mode in which the digestive process was performed. It is a constant statement that certain articles of food, difficult of digestion—such as cheese, nuts, pastry, etc., will almost invariably be followed by the

development of some of the lesions of acne, and many will state these appear whenever constipation occurs.

Eczema will frequently exhibit the relations under consideration to a very marked degree, and it will be absolutely necessary to consider and treat them very carefully in order to obtain much or permanent benefit. This is especially the case when the eruption is situated about the mouth or on the hands, and on the anus or genitals.

In all eruptions exhibiting a congestive element, it will constantly be found that the disease is aggravated by any disturbance of the digestive tract, and often local treatment will prove relatively ineffective until attention is directed to the digestive functions, and any errors there corrected. As previously mentioned, this may also be observed even in cutaneous diseases which are supposed to be of local origin; and in syphilis it may frequently be necessary to suspend an otherwise proper specific medication, until relief is afforded to a digestive disorder which prevents the right and sufficient action of the same. The reputation which nitric acid has long had as a remedy in syphilis undoubtedly lies in its restoring a healthy tone to the digestive organs, which had been long taxed with anti-syphilitic medicines; it certainly often does prove a most efficient aid in the treatment of this disease.

II. NERVOUS DISORDER OR DISEASE.—Itching is a prominent element in connection with many diseases of the skin, and the measures for its relief occupy a considerable share of the attention in dermatological practice. In many instances, as in scabies, it is but a result of a local cause, and disappears when that cause is removed. In other cases, as in pruritus, it appears to be the essence of the disease—the external lesions being entirely secondary. In a still larger share of cases it appears as an integral part of the disease, coincidentally, it may be, with lesions upon the skin. But in each and all of these cases it indicates the nervous element in connection with the skin disease, and may be aggravated by agencies which depress the nervous system.

The direct effect of nerve agency is sometimes very strikingly exhibited in connection with diseases of the skin. In

my book on *Eczema, and its Management*, I record a number of instances where nervous excitement and exhaustion were invariably followed by the development of a new eruption, and similar instances have come under my observation since. As a single example, I may mention the case of a young married lady who had considerable to annoy her in her home affairs. With each recurrence of domestic disturbance, and consequent nervous excitement, an eruption of eczema on the hands, which would yield in the interval, would appear with renewed vigor. This I observed a number of times, and she had repeatedly remarked the same.

The depressing effect of tobacco on the nervous system is often exhibited most strikingly in its effect upon the skin. All are familiar with the *clammy sweat* occasioned by this agent in those unaccustomed to its use, and also occasionally arising from excess in the same. In a number of instances I have known eczema aggravated in a most remarkable manner with each indulgence in tobacco, after its use had been abandoned; in *eczema about the anus*, it seems to have a peculiarly bad effect.

The relations of the nervous system to diseases of the skin are being more and more recognized, and some writers have gone so far as to claim this influence as of importance in the causation of a large number of skin lesions. Undoubtedly this can be carried too far, but the recognition of a nerve element which is important clinically and therapeutically in many cases of skin disease cannot fail to occur under sufficiently careful observation.

In regard to the anatomical and pathological support of a relationship between skin disease and nerve elements, it is to be remembered that this is very great and abundant, as I have elsewhere detailed.* Skin lesions of the most diverse kinds have been observed to follow and depend upon disease or injury of nerve trunks, spinal and brain disease, or nervous exhaustion and shock. Changes in portions of the nervous system are constantly found in *herpes zoster* and *leprosy*, and have been observed in connection with *pemphi-*

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gus and other diseases; and the more the subject is studied, the more does it become apparent that the nerve element is one of the most important in diseases of the skin. The value of arsenic in this class of affections may be largely attributed to its action through the agency of the nervous system.

How far actual diseases of the nervous system have to do with diseases on the skin remains yet to be determined. The works on nervous affections contain but very little bearing upon this subject, but in current literature much may be found indicating a relationship which at times is of very great importance.

III. CIRCULATORY DERANGEMENTS.—Disease of the heart is not known to be connected with any lesions of the skin, but functional disturbances of the heart and circulation may constantly be observed in connection with many cutaneous affections, and venous obstruction and disease are frequently found to be important factors in this connection.

No more striking illustration of a functional disturbance of circulation in connection with disease of the skin could be found than that exhibited by the case mentioned in the letter above quoted. Here, while the hands and feet were icy cold, the face and nose were throbbing, hot, and red; and this relative disturbance may be observed in many cases of *eczema*, and is a frequent feature in *acne*. In my recent work on *Acne*, I recorded the disturbances of this kind which I had found recorded in the notes of my cases. These were "cold feet and hands, frequently with cold, clammy sweat, and sometimes with burning and dryness; flushing of the head and a burning pain on the crown; palpitation of the heart without exertion, as at night; cold, chilly sensations while warmly covered in bed; vertigo on sudden rising; fainting seizures, etc."

The flushing of the face from excitement, from changes of temperature, from exposure to heat, and from a stooping position, will always make eruptions here worse, not only temporarily, but will also cause permanent increase of disease.

Hemorrhoidal congestion often plays a very important part in connection with *eczema* of the anus and genitals,

and the impeded circulation of the lower extremities caused by long standing on the feet will always act as a bar to the cure of—if it does not act directly as a cause of—eczema and ulcers of the legs. *Purpura* and *hæmatidrosis* must not be forgotten in connection with the relation of diseases of the skin and disorder of the circulatory apparatus.

IV. SEXUAL DISORDER OR DISEASE.—One of the most striking possible illustrations of the connection between the sexual organs and lesions upon the skin is found in the rare and peculiar disease, *herpes gestationis*, of which a number of instances have been recorded. Here, with each succeeding pregnancy, the cutaneous irritation arises, and is followed by the development of papules and vesicles, which continue to appear in fresh crops until confinement takes place, and then the eruption vanishes when the uterus regains its normal state, only to reappear during the later months of another pregnancy.

Pruritus, either confined to the genital region, or quite general, is another of the skin disorders which is not unfrequently seen to be associated with pregnancy, and different writers have reported other symptoms connected with the condition of a gravid uterus. Hebra states that in some females eczema of the hands occurs so uniformly when they become pregnant that they can tell more certainly when they are with child by the appearance of the *eczematous eruption* than by the cessation of the menstrual discharge.

All are quite familiar with the brownish pigmentation appearing principally on the forehead and about the mouth in women, to which the name of *chloasma* has been given. While this may occur occasionally in males—and, as I believe, from hepatic causes in certain cases—in quite a large proportion of instances the eruption is more or less closely connected with disturbed uterine functions, recurring with each derangement of this nature. So strikingly does this often happen that the affection has received the name of *chloasma uterinum* from some writers.

The connection between sexual disorder and *acne* is most striking and familiar to every one. Not only is the eruption apt to be worse just before, during and after each normal menstrual epoch, but the least disorder in this function is

almost sure to be reflected upon the face. In *acne rosacea*, an unusual amount of eruption upon the chin is almost a sure sign of menstrual disorder. In my work on *Acne*, I analyzed the histories of 510 cases of acne in females in private practice. Among these, I found that in 259 the menstruation was recorded as habitually deranged, while in 60 others it was more or less affected. Many of these patients had serious uterine or ovarian disease; in others the derangement was but functional; but in the larger share of them the face reflected the condition of the uterine functions in a manner which added greatly to the distress of the patient. In the case already mentioned at the beginning of this paper, the eruption was markedly affected by the state of the uterine function.

The sexual relations of diseases of the skin are less marked in males—probably because in them these functions play a less important part in the life of the individual. But there is little doubt that sexual abuse does induce the development of acne, and patients will frequently observe that the eruption is worse after the occurrence of a seminal emission. It has recently been recorded by Sherwell that *acne rosacea* ceased after the repeated passage of urethral sounds, when it had previously resisted all treatment.

V. GENERAL CONDITIONS—ANÆMIA, DEBILITY, ETC.—Disease in any organ represents a lower vital tone, and instances can be found daily where the skin has become affected time and again with each depressed condition of the system, which would disappear again as the general vitality was raised, either by tonics, change of air, food, surroundings, or by any agent which restored a normal vigor of health, and this without the slightest medication. Many instances could also be cited where all local measures proved wholly impotent, until by some means a higher grade of health was secured. It is hardly worth while to enlarge upon this branch of our subject other than to state that almost daily my experience confirms this statement, and frequently in a most impressive manner. Undoubtedly a very considerable share of the gain obtained from visits to foreign watering places may be accounted for by the increased measure of general health thereby acquired.

VI. SPECIAL CONDITIONS, AS MALARIA, GOUT, AND RHEUMATISM.—The subject of the influence of *malaria* in the production of diseases of the skin is one to which very little serious attention has been given. Acute malarial infection is not known to cause lesions of the skin in any direct manner, but it is more than probable that in its later, secondary effects, it may, and often is, accountable for a measure at least of these affections. The fact of a malarial urticaria, whose attacks may certainly be cut short and stopped entirely by quinine in inefficient doses is beyond question; and in many cases of eczema, I have noticed that the paroxysms of itching came on at a regular time of day, and I have been able repeatedly to check these and to materially benefit the eruption by the free use of quinine before the expected attack. By its later effects upon the liver, malaria may, I think, open the way for, if not cause, some other skin diseases.

Gout, or the gouty state, has long been recognized as an important element in the management of many cases of skin disease, and is a condition the possible existence of which should always be borne in mind in this connection. In many instances eczema will be seen to alternate with active manifestations of gout in the joints, or with a gouty diathesis, while the milder symptoms of acidity in its various exhibitions are constantly to be observed in many patients exhibiting various lesions of the skin.* If these are not met by proper treatment, the diseases will often prove most rebellious, while attention paid to this element, in the way of diet, exercise, and proper medication, will often assist marvelously in the treatment of the case.

Rheumatism is less markedly observed in this connection, but does form an element in certain skin diseases, as in *erythema papulatum*, where the joint complication may sometimes be very severe.

If I have succeeded in making my subject clear, it will be seen, I think, that diseases of the skin may sometimes bear very important relations to disorders of other organs; and he will act most wisely who, in endeavoring to remedy the

* On the Gouty State in Diseases of the Skin. *Amer. Practitioner*, Nov., 1877.

former, will take a broad view of disease, and who will not merely regard the particular lesion under treatment, but will consider the individual presenting the same. And he will succeed best in the treatment of diseases of the skin who is a thoroughly educated physician, ready to recognize and appreciate the relations between disease of the skin and disorders of other organs.

4 East Thirty-Seventh street.

ART. II.—**Lecture on Hydrophobia.*** By ARCHER ATKINSON, M. D., Baltimore, Md. Late Professor of Practice of Medicine, Baltimore Medical College; ex-Professor Materia Medica and Dermatology; late Member of Academy of Sciences, and Member of Baltimore Microscopical Society.

Hydrophobia is an affection at this time engaging the attention of the scientific world, and, from the many reports of cases, appears to be more frequent than formerly; indeed, for eighteen centuries the disease has engaged the studies of physicians.

NAME.—It takes its name from the Greek word, meaning the dread of water, from the supposed aversion the patient has to fluids. The Latin term is *rabies*, and if in the dog it is *rabies canina*. The French simply term it "*la rage*."

GENERAL DESCRIPTION.—The disease is generally well-marked in man and in the lower animals, being characterized by great nervous excitement, by the secretions uniformly of *viscid saliva*, and often a great dread of swallowing, whether of liquids or of solids, and is almost sure to end fatally. It is caused by inoculation from the bite of some rabid animal. In man the disease is so seldom met with that many physicians in large practice have never seen a case, and yet its great severity and fatality should call for the promptest means of prevention and care. The suffering is so great and the result so fatal, that it is held in great horror by the community.

Prof. Hughes Bennett, of Edinburgh, defined it as "an affection characterized by spasm of the muscles of the

*Read before Baltimore Medical Association on 22d March, 1886, and by request before the class of Baltimore Medical College.

pharynx and of the chest, with difficulty of swallowing and dread of fluids." Nysten, in his "Dictionary of *Medicine and Surgery*" terms it "an assemblage of phenomena which result in man from the bite of enraged animals." Rabies or rage is designated by the name of hydrophobia, but the real aversion for water and other liquids shows itself in several nervous affections bearing little in common with rabies. He adds that, to all appearances "the rage" may be developed spontaneously in the dog, the cat, the fox, the wolf, and in other animals which may transmit it to other quadrupeds as well as to man, but it is doubtful if it is even developed *sua sponte* in man. Some medical men have thought the condition of madness as being in all cases the effect of an intensely exaggerated imagination; but what proves that the condition may and must be due to a peculiar and especial virus, is that it occurs in infants and in animals, whose imaginations could have no part in the symptoms which follow. Many facts go to show that the saliva and bronchial mucus are the only vehicles for the rabid virus, whose effects manifest themselves in some cases very soon after the infliction of the injury, but in most instances are preceded by a period of inoculation or gathering together for the final explosive effort, whose duration is variable.

Public opinion is much at fault as to some points about this disease; as to its mode of development, its course, the season of its greatest prevalence, the time of its incubation and the signs by which it may be recognized. We cannot assert that the disease never arises *spontaneously*, though nearly all evidences point adversely to such an origin. We do know that there was a starting point in the first dog that became rabid, and that, one case accounted for, we can understand all after inoculations. We know the disease follows the absorption of a poisonous virus from some animal which has itself been subjected to the bite or saliva of a rabid animal.

ANIMALS LIABLE TO IT SPONTANEOUSLY.—We find the disease in nearly all animals, chiefly, however, in the canine and feline species. Carnivorous animals are most prone to attacks. Herbivorous animals are less dangerous, being

more servile to man, though horses and cows have been known to become violent and crazed after being bitten by a rabid dog. An instance is just now recalled of a cow which became furious and died from all the signs of hydrophobia after being bitten by a rabid dog in Virginia. This same cow imparted the disease to most of a pack of hounds which chased him from the farm. The cur died hydrophobic a day or so afterwards. Ordinary anger seems to intensify the severity and even the virulence of a bite. Thus horses, sheep, mules, foxes, rabbits, wolves, and even fowls, may take as well as impart the disease. Indeed, any animal may become hydrophobic when bitten by another which is rabid. In the Western States, the bite of the rabid skunk is thought to be most apt to impart the disease, and many claim that the bite of a rabid cat is even more dangerous than that of the dog.

THE PERIOD OF INCUBATION.—We have in most infectious diseases what is termed the period of incubation. What is the period in each such disease we can only approximate, though we hear of cases of scarlet fever being caught as long as a year after other cases in the same house had recovered, the house having been empty and thoroughly cleansed and purified in the meantime. We have also known malignant scarlet fever taken from sleeping on the same mattress three months after a very mild case had recovered. We can never tell how long a room, the air, the bedding, even the clothes of a patient may retain the germs of disease. If grains of oats have been known to sprout after being entombed for centuries in darkness in the pyramids of Egypt, we need not be much surprised to find fresh diseases kindling up on the hills of our old ones after but a few months interval. Of these things we can but conjecture; but it behooves us to remember that we are walking over volcanic soil, which may at any moment overwhelm us like an earthquake. Jaccoud collected 214 cases of hydrophobia, and found the period of incubation was less than one month in one-fourth of the cases; from 1 to 3 months in 143 cases; from 3 to 6 months in 30 cases; and from 6 to 12 months in 11. Gourgie gives it in the majority of cases as from 4 to 8 weeks.

It is a curious fact, that rabbits inoculated with human saliva soon become victims to blood-poisoning, as shown by Dr. Sternberg at the laboratory of the Johns Hopkins University in this city, in cases where fresh saliva caused fever and septicæmic poisoning, and the animal died, say in forty-eight hours. The blood was shown to be full of *bacilli*, and this blood injected beneath the skin of a second healthy rabbit caused death in about half the time, and its blood in turn contained an abundance of the same bacilli with that of the first rabbit. This tendency may obtain *only* in the rabbit from its contracted lymph spaces, and from the fact that it is about the easiest animal to kill under all circumstances.

Dr. Elliottson saw six cases of this disease, and estimated the time of inoculation to vary from *six to sixteen weeks* in the *dog* as well as *in man*. He cites the case of a pack of hounds in Yorkshire, England, which were bitten by a rabid dog, the disease appearing at intervals of from six to sixteen weeks as stated. Dr. Bordsley gives the case of a shepherd whose hand was merely licked by a dog, and who had the disease within the afore-stated time. Dr. Vaughan mentions that between twenty and thirty persons were bitten by the same rabid dog. Some took so-called precautions, while others took none, and yet only one had the disease. Dr. Elliottson gives a case where two sisters were bitten by the same dog. One died of hydrophobia within six weeks, while the other exhibited no sign of the disease. The child of Edward Applegate, of Spottswood, N. J., died of the disease in January, 1886, just twenty-one days after being bitten. He suffered all the agonies of a typical case. *Per contra*, a man named Faust, in Akron, Ohio, recently struck another man in the mouth, wounding his knuckles on the teeth. The part became greatly swollen and the man died from blood-poison, raving like a madman for ten days. In 1867, a child died in this city fourteen (14) days after being bitten by a rabid dog. The dog died two days after inflicting the bite. The Duke of Richmond is said to have died of hydrophobia as the result of a bite from a rabid dog.

The writer saw a case in a man aged 46 years. He was bitten on the shin by a fice dog. The dog was eating and

the children were worrying it. The father seeing the dog snap at the children, kicked it, when the dog bit him as stated. The wound did not heal entirely, but caused no trouble for six weeks, when the man was suddenly seized with a sense of great depression and died in twelve hours. The characteristic features of the case were the extreme depression, the horrible dread of death and the indisposition (not inability) to swallow anything. The dog was allowed to live, and showed no sign of rabies.

CAUSE.—In man, we know the disease is produced by the virus of some animal rabid for the time or permanently so; and yet there are a few cases which rather favor its spontaneous origin. And while there may or may not be modifying influences which operate on man or on his imagination in favoring attacks, we can readily imagine that heat, anger, bad or insufficient food may prove factors in producing the disease in the dog, in which we find by far the most cases. Certain it is, that in man the fear of a disease will act as a great depressant on the nervous system, rendering the individual especially susceptible to the disease he may dread.

Can hydrophobia be really idiopathic like tetanus, or must it result from injuries of the peripheral nerves? Dr. Formad has found that under very unfavorable hygienic conditions, almost any animal will take on tuberculosis, such as hunger, darkness, dampness and cold. Indeed, any influence which serves to keep the lymph spaces abnormally contracted are thought to favor the tubercular diathesis. As certain animals seem more liable to contract tetanus (lockjaw), so there are certain ones more liable to rabies. We know there is an idea that mules are preferable on street cars, as being less susceptible than horses to tetanus after injury in shoeing, just as we find a frequency of lockjaw in the new-born infants of the West Indies.

Hydrophobia is so greatly on the increase in France that stringent measures are being adopted to rid the villages of all dogs found at large. In Battersea, London, dogs are made to die a sort of a chemical death, being turned into a room where they lie down to awake no more (or, as they say in some countries, "to awake up dead"), the air being

charged with the vapor of chloroform and the bisulphide of carbon acted on by carbonic acid gas.*

TIME OF THE YEAR FOR HYDROPHOBIA. For a great while it was thought that most cases occurred in the heated term of summer, the so-called dog days of August; but Bouley collected 3,000 cases of which 27 per cent. occurred during the Spring months. Prof. Key, of the Veterinary School at Lyons, has observed that the number of rabid dogs in that section was greater during the Spring (say early Spring) season than in the dry season. Of 190 cases occurring at the school at Alford for ten years from 1853 to 1863 the frequency was as follows: In March, 21 cases; in January 20; in April, 25; in June, but 18; in November, 14; in August 16; in December, 12; in February, 10; in October 10 making in all 190 cases. We do not hear of cases in Constantinople where the heat is great and where dogs almost block the way of the passer-by. Indeed, James Bryce in a lecture in that city says, "as canine madness is unknown, or nearly so, no one need fear hydrophobia?" though really there are no more dogs there than in other large cities where no police surveillance is observed.

EFFECTS OF THE BITE.—The effects of a bite of a rabid animal are by no means commensurate with the size or condition of the bitten part. In fact, the wound is mostly slight, healing up rapidly and giving little or no pain or other present trouble—the great risk being not from the severity of the injury, but from the absorption of the saliva which contains some very active poison, which is capable of being quickly absorbed. Some circumstances may modify the absorption

* It is proposed in this State to enact a very stringent dog law; but the better plan is to tax the animal beyond the power of the masses to keep such pets—say \$10 dollars for the male, and double the amount for the bitch each year. To protect man should be the first object of legislation, to protect sheep *might* be the second, and if such a tax was imposed there would be still left dogs enough to protect property as well as to destroy half the people. The life of one good citizen is worth more than the value of all the mongrel curs of low degree in all christendom. One good dog when kept at home as a watch dog or beside the butcher's stall or it may be in the bank or on a farm to keep off tramps, is well enough; but such dogs as poodles, my ladie's Prince Charles, the Spitz and coach dogs at large and thieving hounds are worthless and dangerous to life and being, and should be destroyed rather than have an entire community of civilized people kept in a constant state of anxiety and suspense for themselves and their little ones.

and activity of this poison. Indeed, it has been supposed that man is *very decidedly* less susceptible to its influence than is the dog. M. Renault, at the Alford School for Experiments on Animals near Paris, found that dogs bitten by rabid animals *did not* go mad in the rate of over 33 per cent. of those bitten—say one third. This School is for experimental purposes, and where great numbers of animals are kept for just this purpose, with full sanction of the French government, and where no society against cruelty to animals can have jurisdiction; the French believe fully in the benefits of vivisection and experimentation in the lower animals and are very willing to subject a trifling dog or a rabbit to a few pains that the lord of creation may thereby gain immunity from inoculable diseases. But in most of the experiments the animals are placed under the influence of chloroform and die unconscious of pain.

Again, the thickness of the clothing may modify the entrance of the saliva into the skin; or it may not come in contact with a raw surface, or the saliva may be washed away with the excessive flow of blood, if the bite is a large one or in a vascular part; or the virus may be destroyed by the agency of chemical or surgical measures. Certain it is, that all bites from rabid animals do not produce hydrophobia. Bouley thinks that in the Department of the Seine (in which the city of Paris is located) no less than 100 dogs go mad every year. In 24 cases of hydrophobia, reported at Alford, in 1860, ten of these rabid animals were known to have bitten 15 persons; that is, 15 bites have been inflicted by 25 mad dogs. This would give for 100 dogs annually affected by rabies, 60 persons bitten during the same period, and yet there are but from two to three cases of death from this disease annually in this Department; and according to this count not more than three in sixty persons bitten by rabid dogs afterwards become hydrophobic. But even this small per cent. more than outweighs the value of a continent full of worthless dogs.

NATURE OF HYDROPHOBIA.—Marachetti, a Russian physician, thought that the virus, after having been absorbed from the wound, passed into the general circulation to become

concentrated under the tongue, where may be seen to form from the 3rd to the 9th day small vesicles which enclose the inoculating fluid or virus, and which vesicles he called *lysses*, from a Greek word meaning "rage." At this period of the disease, it has been claimed that, if the vesicles are removed and well cauterized, the further progress of the disease is arrested; but if, on the other hand, they are left to themselves, the virus is re-absorbed at the end of twenty-four hours. These ideas have not been confirmed however. As far as known, rabies is readily transmitted from the bite of the rabid animal, the teeth making two or more abrasions or holes—the saliva being conveyed both on the moistened tooth and by the moisture of the mouth; that is, inoculation from the rabid animal seems to be instantaneous. It has been ascertained that, of many persons bitten by dogs known to be rabid, very few have sustained material injury. Dr. Hunter, as cited by Prof. Gibson, related one instance where twenty persons were bitten by the same dog, and yet, only one out of the twenty took the disease. Dr. Hamilton made a calculation that about one person in every sixteen bitten by rabid dogs takes the disease. Mr. Cline made a number of experiments to ascertain whether the saliva of a hydrophobic man in the last stage of the disease could by inoculation infect the lower animals so as to propagate the disease. The fresh saliva was inserted into these animals, and not one of them showed the slightest sign of hydrophobia at the end of three months. Sir Astley Cooper found that the saliva of a mad dog inserted by a lancet (inoculated) into the thigh of a dog, of a pig, of a rabbit and of a fowl, failed to produce any injurious effect, though some of the animals were watched from nine to twelve weeks. After the lapse of three months the chances for attack grew less each week.

There seems to be in the dog a disease called the "*dumb rabies*" which has been mistaken for the genuine affection. It was so called because the animal is unable to give utterance to its troubles, and because it either cannot or does not bite. It holds its mouth half open, being unable to close its jaws so as to seize objects. The animal seems greatly anxious until it becomes unconscious, and generally the end is

death, though cases do recover when left alone. These pseudo cases take on very much the aspect of *epileptoid* convulsions as well as the affection seen in the horse, called "*blind staggers*" (no doubt cerebro-spinal meningitis) in which the horse, like the dog, shows a disposition to bear to the left, whether in walking or in staggering. I have seen dogs with what seemed to be this dumb rabies, apparently furious with themselves, yet not noticing objects about them, with eyes congested and saliva frothing from the half-open mouth. They pitch headlong, as if unconscious where they go, and fall into convulsions, always bearing and falling towards the left.

In many respects, hydrophobia resembles tetanus in following an injury—in the great severity of its symptoms and the almost certainty of its fatal results and in the absence of organic changes to be found after death.

We know that we have a peculiar septic condition of the part in diphtheria, known as the micrococcus. We have seen, too, the rod like bodies in the purulent expectoration of a man who died recently of pneumonia, and we hear of the bacilli of erysipelas, of thrush, of syphilis, of pulmonary consumption; but the bacillus of rabies has never been made out, so that it is impossible to give any definite idea of the condition of the blood or of the peculiar poison or ferment in this fluid. Indeed, some authors have thought that the frothy saliva which is supposed to inoculate the wound from the rabid dog is not really the saliva of the animal, but the *vitiating mucus* from the bronchial tubes, rendered frothy by the convulsive breathing of the hydrophobic subject.

FREQUENCY.—During the six years from 1853 to 1858 inclusive, there were in the whole of France known to be only 107 cases, making one case a year for every 200,000 persons. In the Department of the Seine, there were ninety-four cases in forty years to one million of people, or about two-and-one-half for each year—the greater frequency being accounted for here by the greater population being in the great city of Paris and its environs. In New York city, where the population was one million, there were in six years (from 1866 to 1871), inclusive but 22 cases, or an average of three-and-two-thirds a year. We rarely see noticed deaths

from hydrophobia in the reports of large cities; and in the mortuary statistics for Baltimore for 1885 (January 1886), we find no case out of 8153 from all diseases; and yet there were 1270 deaths, or one-sixth from consumption alone; nor do we find reference to it in the list of causes of death enumerated on the back of the form for death certificates.

APPEARANCE OF THE BITTEN PART.—The wound may present *no* special difference from a bite by a non-rabid dog; but now and then there will be redness, dryness, numbness or a sense of itching in the part, when the case is to develop into the disease we are studying—no matter whether the bite be still open or a fully healed cicatrix. The healed wound may become swollen, with red cords or lines, one or many, beginning at some point in the wound and running up the limb to the nearest lymphatic gland—a sub-acute lymphangitis so to speak. This may last from two to four days, and yet the patient be only feverish and uncomfortable; soon other more alarming signs may succeed with greater or less rapidity.

SIGNS IN THE DOG.—Youatt and Bouley claim that the first signs in the dog going mad consist in a gloomy disposition, with a nervous agitation and disquietude, which re-betrayed by frequent change of position. The dog, usually cheerful and fond of companionship, seeks to avoid his master skulking, away into its kennel, into a closet, into corners, under furniture, trying in every way to escape notice. If called out he obeys slowly, but again returns to his covert. He soon appears dissatisfied and changes his position. Nothing seems to suit him, and he is restless, wandering from place to place apparently without object. He has an uneasy look about the eye. Yet dogs will demean themselves just in this way when they are uncomfortable, as with wounds, fever or indigestion, as well as in the beginning of distemper. The main points are that the animal *seeks to avoid observation*, and that he is *never still for any length of time*. These two traits go far to attract attention when taken together, and should become *at once objects of suspicion*.

The next point is that the dog has *slight hallucinations*, seeming to hear sounds which no one else can hear, and to

see objects which have no existence. He pricks up his ears and rushes to some spot as if he heard noises there, or as if he saw something. He may snap at the air, as if at something about to attack him, or he may stand still as if waiting for something to approach. He may show no inclination to bite at this stage; indeed, close observers have noticed that otherwise well disposed dogs will refrain from snapping or biting till late in the disease. He may not show any disposition to bite his master, and yet will be easily provoked at a stranger. This itself draws suspicion to a dog when he presents no other sign of rabies. During this period, the animal has no dread of liquids; but after the disease has become more fully developed, deglutition becomes difficult and painful because of constriction of the muscles of the throat. The supposed dread of water is a fatal mistake, as many a dog may be rabid and yet partake of water even if he have to thrust his nose deep down in the water to cool his mouth and to enable him to drink. Nor does the dog at first refuse its food though he may take it with little avidity. In some cases there is a depraved appetite, the animal gnawing at and trying to swallow anything within its reach. This too is suspicious. The bark now becomes peculiar—a yelp taking the place of the natural bark; the voice becomes changed, and instead of the strong prolonged bark it becomes hoarse and muffled, beginning with a single yelp and following it up by two or three howls, coming as if from deep down in the throat. Prof. Bouley claims that he and his pupils have recognized the bark of the mad dog before the animal came in sight and at some distance off. The saliva now becomes increased, but this lasts rarely longer than twelve hours and is never so abundant as is seen in dogs suffering from epileptic fits which are common. The true hydrophobic saliva consists rather in great viscosity than in any great abundance of the fluid, and it is so very tenacious that the animal tries to drag it from his mouth with his paws. These efforts would lead one to suppose that something had lodged between the teeth, and persons have been bitten in the effort to dislodge the supposed object. It is a mistake to suppose a dog is rabid because he snaps at objects in his way; on the con-

trary, he is too much occupied in his own sufferings to think of those about him, and this snapping is but one of its hallucinations.*

All animals suffer from convulsions of the clonic variety during some stage of hydrophobia, and Grisolles enumerates some of the effects of "*convulsive ergotism*," as he calls it, which have some resemblance to those of tetanus and rabies. Prof. Ross, of London, in his late work on Nervous Diseases says: "Clonic spasms of the facial muscles produce a species of grimaces and contortions in which the labial commissures are drawn outwards at each successive jerk, and a peculiar noise is made by the passage of air through the mouth, the lips being covered by a frothy and often sanguinolent mucus."

Some authors regard hydrophobia as a neurosis of the muscular and of the swallowing apparatus—a dysphagia much dependent on the imagination; others admit, besides the hydrophobia as a symptom of a lesion of the brain and of the nerves of the pharynx and œsophagus, a rabiform hydrophobia, which they think may be only a spontaneous rabies or rage. Mr. Youatt claims that the saliva of horses, of the badger and of man even has given rise to rabies, and some even declare that it may be developed from the bite of the duck and the hen.† Nervous persons are unquestionably more liable to the disease than are the lymphatic; indeed, such persons are burthens to themselves and to their friends from their so called "bundle of nerves." The Dutchess of Bedford used to congratulate herself that she was born before nerves were "invented."

POINT OF ELECTION.—We cannot say positively that there is any centre or point of election for the virus to act on in producing this affection, but many symptoms lead us to believe the concentrated action of the poison (virus) to be on the centers of respiration in the medulla oblongata just be-

* It is thought that the Spitz dog is most liable to become rabid, but all things being equal the coach dog would be most dangerous, since he is by nature the crosslest of all the companions of man.

† In the August number, 1878, of the *Virginia Medical Monthly*, Dr. James B. McCaw reports a case of hydrophobia, fatal, due to the bite of an owl.—ED.

tween the axis and the atlas, about the floor of the fourth ventricle. Yet we cannot know this as we can in some infectious diseases—as the throat in scarlet fever and in diphtheria, or in the venous system in cases of bite from the rattle snake showing a rapidly phlegmonous tendency.)

DURATION.—Hydrophobia when once fully established is a very acute disease, the first stage occupying from one to three days, the average time being twenty-four hours, while the second stage may last about as long or may end in a few hours from sheer exhaustion.

SYMPTOMS.—For some time after the bite, no signs are manifest—the virus resting in a latent state, generally for several weeks; but the symptoms are apt to declare themselves *within twelve weeks*, if they are going to appear at all.

The chief signs of the invasion in man are a sharp pain in or about the bitten part, a severe headache, an excitation of the intellectual faculties and of the organs of sense; more or less disorder of digestion, with a *great dread* of the condition which the patient imagines to be hydrophobia. Soon follows more or less difficulty of swallowing, or a sense of constriction of the throat and of the gullet, attended by a burning and unappeasable thirst, which coexists with the "*lave eumense*." This spasmodic condition of the throat is well illustrated in the case cited by Sir James Watson, where a coachman was bitten on the hand. Dr. Roberts, in his excellent work on Practice, says "the patient feels uncomfortable, low-spirited, and restless." He may have flushes of heat and of cold by turns; then follows a feeling of oppression of the chest, with deep, involuntary sighings; and now and then there may be pain in or over the epigastric region, because of spasms of the diaphragm—the spasms being confined to the respiratory regions, to the œsophagus and throat, marked by—first, spasmodic affection of the muscles of deglutition and of respiration; secondly, exquisite sensibility (hyperæsthesia) of the surface generally, and of special senses; thirdly, great mental anxiety, and a fearful anticipation of quickly impending danger, feeling that the sword of Death is hanging over him by the frailest thread.

Now begins stiffness of the muscles of the neck, around

the jaw, increased anxiety and depression, often attended by hallucinations and delirium. Thirst now becomes great, and swallowing so difficult that the patient fails to carry the fluid to the stomach, the muscles expelling it from the mouth. This dysphagia has given rise to the idea that the patient is afraid of water, while he is almost dying from thirst. Dr. Bardsley says, "patients go from bad to worse, and finally die before the sixth day." Dr. Watson says of the two cases which died under his notice, that in the second case the symptoms were milder than generally described. He adds: "For several days this patient had no bad symptoms, except a painful and swollen arm, though the teeth of the dog did *not enter* the skin. For ten weeks after the bite no trouble arose, and not until the seventh day after seizure did the man die. On the third day, he found he could not drink because of spasm of the neck. He exhibited no sign of madness, and was composed except when trying to swallow. Just before death he raised quite an amount of ropy mucus, and even bit his wife's hand in her effort to wipe away the froth, drawing blood, but the bite caused no trouble. In the second case, the patient thought he had the disease, and was prepared for his fate. He sighed deeply and often. He was bitten late in July, and came into Middlesex Hospital on the night of the 4th of October. He bore a scar on his left hand. His pulse was 84. He received the bite in his effort to save the dog from drowning, and supposed the animal could not be mad, as it went into the water. The day before he came into the hospital, he was restless, and found he could not swallow liquids. He noticed a pricking about the scar, and now and then an expression of terror was noticed, followed by sudden, deep sighing. At other times his breathing was natural. The man ate rice and milk, but with effort. He became excited by the sound of pouring water, but there was no positive spasm. Next day he became greatly excited on being asked to take water, and became furious, jumping from his bed, continuing more and more disturbed till the next night, when he died. He spat at the bystanders, and entreated to be poisoned. He expectorated a great quantity of mucus, and died of nervous prostration."

THE PROGNOSIS may be said to be always unfavorable, the patient nearly always dying in great suffering.

MODE OF DEATH.—Death is apt to follow from suffocation and difficulty of deglutition, or from great nervous prostration (neurasthenia), the disease generally lasting from three to six days. The viscid saliva causes great worry, which, with the convulsions, reduces the patient's strength to the last extremity. In the case seen by the writer, death was the result of great anxiety and nervous depression.

PATHOLOGY.—Of the pathological changes in this affection but little has been learned, except, perhaps, a general state of congestion of the brain and spinal cord—such as we would find in all cases of cerebral, spinal or meningeal inflammation. Dr. Ross, however, thinks the changes in the cord deserve special notice. In six cases he saw, there were well-marked changes in three, while in the other three the changes were very slight—the whole of the gray substance being infiltrated with leucocytes. He noticed changes in ganglionic cells, the full-sized cells often containing yellow granules, and even appearing increased instead of being lessened in the spine. Some writers think the poison first acts on the medulla oblongata, and especially on the centre of respiration. In the case examined by Dr. Watson, the post-mortem revealed fluid-blood in all the vessels, which is not uncommon in death from virulent animal poisons. The cord appeared natural. The papillæ on the back part of the tongue were greatly enlarged, resembling large vesicles. The reflex function of the spinal cord is greatly excited, just as in tetanus.

PROPHYLAXIS.—The idea of preventing hydrophobia is upwards of one hundred years old. Absolute prevention will be freighted with incalculable benefits to the human race, if it should prove possible, as at last seems likely—as great as that by Jenner in preventing the smallpox, deserving monuments taller than for him who overturns dynasties, or for him who saves his country from the devastations of civil wars—a pension worth the income of an empire. Not the wealth of a Vanderbilt could reward such a man. And why should not the laborer be worthy of his hire? The poison cup, the bullet of the assassin, the bombful of dynamite, in

cabin and in princely hall, in the store and on the public highway, are no surer means of destruction, to which all are exposed, than is the virus, the inevitable destroyer, from the rabid dog. *Pro bono publico* should be our motto; the *greatest good* to the *greatest number* should be our plan of action—the speedy destruction of the pestiferous agent of the death-dealing virus. Joaquin Miller says the Greeks make the best disposition of these pests by hanging them. Here surely, then, the single ounce of *prevention* outweighs the many pounds of cure; for the disease, once established, has in most cases shown the inutility of all therapeutic measures.

The possible plan of destroying the virus is to cauterize *at once* the wound, so as to prevent its absorption by coagulating the fluids around and occluding the absorbents and capillary vessels. Thorough washing the bite may prevent trouble. The free withdrawal of blood from the wound by strong cups may also do something. Possibly strong carbolic acid applied to the part would be of use. The heated iron is the thing to use; but how seldom are we prepared for this emergency? Not in one of fifty cases can patients be treated at once. Dr. Roberts says “the most important element of treatment consists in *immediately* cauterizing the part by means of the stick nitrate of silver, by the hot iron, by caustic potash, and the complete excision of the bitten surface; and that other measures are useless.” And he adds that “once the disease is developed, there is no known remedy. It is true that relief might be afforded by the subcutaneous injection of morphia, atropia, or of curare, by the application of the ice bag to the spine, and by the inhalation of chloroform.”

We can never know the period of freedom from anxiety in a person bitten by a rabid animal. Dr Bardsley gives a case which died after twelve years; and we see but to-day a notice of a case of death in London of a lad named Gregory who was bitten thirteen years ago, and yet who has just died of hydrophobia from the bite of a rabid cat. Dr. Roberts says “the period of incubation is indefinite;” about forty days, he says, may be called the average time.

Six children and a veterinary surgeon were bitten in New-

ark, N. J., last December, by dogs supposed to be rabid. These seven patients were sent to Paris to be treated by M. Pasteur with the cultivated virus of rabies. This distinguished chemist has undertaken to render nugatory (negative) the effect of the virus of rabid dogs, provided the cases are submitted to him in time; and he has offered to undertake, at his own cost, the cure (protection) of eleven persons bitten by a rabid dog in Russia.

(In New York and St. Louis arrangements are about being made for the treatment of patients after the Pasteur method—i. e., by inoculation.)

The dog known positively to be rabid is allowed to die, and its skull is trephined, and a portion of the brain or spine is removed, preferably the spinal marrow. This is so manipulated as to render it fit for injection or inoculation into the brain of a sound dog, or of a rabbit, and after sixteen cultivations the virus is ready for injecting into the human body. M. Pasteur says that inoculation of a rabbit by trephining under the dura mater with poisonous marrow of a mad dog always gives *rabies* to the animal after a mean (average) inoculation of fifteen days. If virus is passed from the first rabbit to the second, from the second to the third, and so on to the end of the series, there soon becomes shown a most decided tendency to shorten the time (period) of incubation. After the twentieth or twenty-fifth transmission from one rabbit, he reaches a period of incubation, so-called, of seven days. He began his researches in this way in 1882, and has kept up his experiments (inoculations) with the same crop of virus from rabbits, which, without any intervening recoveries, died rabid. He tells us that if portions of the marrows of rabid rabbits be cut away from the entire marrow and left in the dry air, the force (virulence) of the virus will slowly pass away in spite of the best precautions, the rapidity of the loss increasing with the temperature of the outer air. He kept bits of rabid (virulent) marrow in bottles containing caustic potash, each day suspending a piece of freshly-infected marrow from a rabbit which had died from *rabies*, developed after seven days' incubation. Each day he inoculates beneath the skin of a sound dog a

small amount of broth, which has been made sterile or barren, in which he has left to soak a bit of one of the dried marrows, beginning with such as he had prepared some days before he begins his operations on the dog, so as to be sure it is not too powerful. One great trouble is to preserve the marrow; but if kept from air and from microbes, and in moist carbonic-acid gas, it will retain its virulence for some months. In each successive dog, he inserts the broth in which fresher marrows are immersed (indeed, a soup or a broth into which the poisoned virulent or rabid marrow is infused); or in some cases he skips certain days until he finally uses the fluid from the marrow virulent but two days only. The animal may now be said to be proof against hydrophobia. M. Pasteur treated fifty dogs, of different breeds and ages, in this way without failure. About that time three persons were sent to him for treatment. The dog which bit them was known to be rabid. He decided to inoculate one of them, a boy who had been given up by his physician as doomed to die, and on him he performed similar inoculations to those performed with undoubted immunity on his fifty dogs. He inoculated this boy with marrow fourteen days old; twice the second day he used the marrow which was twelve days old; twice on the third day he inoculated him again; on the fourth day he used marrow only eight days old; and so on, till the ninth day, he inserted broth from the marrow but two days old, and on the twelfth and last day he used fluid from a marrow which was *but one day old*. He was thus ten days in pursuing his treatment in this boy, and made thirteen insertions of marrows of different and lessening ages in that time.

M. Pasteur inoculated the children sent to him from Newark, and has since pronounced them free from the chances of taking the disease. Yet there must for a time exist a lingering uncertainty as to the result. We remember how certain was Dr. Ferran as to his power of preventing cholera by inoculation, and how the hopes of the world, based on his positive promise, were doomed to fall to the ground. We can well imagine the faith of a scientist in his own discovery, and how his grains of pure gold may turn out to be

worthless yellow sand, and how hard it is for one who has burned the midnight oil for months in reaching a pet conclusion, to acknowledge his hopes have proved but visions to lead him astray. No man of experience and known skill would willingly deceive himself or his fellow-man on so important a subject; and no one can well arrive at a fair conclusion without having enjoyed full powers of experimentation. Still the dread calamity hangs by the feeblest tenure over the devoted heads of the pseudo-protected patients.

M. Pasteur cannot know *a priori*, nor can we know—nor can patients feel sure—that the inoculations may not prove delusive. We hope for—aye, long for—the success of the treatment and cure for the inhabitants of the whole universe the protection promised them in these experiments. We long to arrive at the truth; to believe in the stability, in the efficacy of whatever is brought before us as declared facts in discovery and in science; but we cannot forget the old adage, that “whatever is new is false.” Time is needed to demonstrate the effectiveness of inoculation against rabies; nor do we know how long we must wait before symptoms may declare themselves before the real outburst of the disease, either in the inoculated (protected, if you so choose to call it), or in such as are left to nature, or even in those whom our feeble means by cleansing and cauterization may protect. The rarity of the affection would go to show that persons bitten have escaped, while some have fallen victims, even where the dogs were known not to have died hydrophobic. In most cases the biting dog is killed—thus, like cremation, putting beyond the possibility of ascertaining what would have been its condition if allowed to live. The question is such a nice one that we are at a loss to know what would have been the actual consequences of the bite inflicted. If we claim that the disease is one of intensified imagination or of extreme terror, we must allow that young children and animals are not possessed of any such powers of imagination as to work up a case, and to throw them into convulsions weeks and months after the healing of the wound. At best, we are, in either case, at a sad loss what to believe.

"J. C. M." writes from Washington, Rappahannock county, Va., asserting that Dr. Pasteur's method of inoculating for hydrophobia was anticipated by Dr. G. G. Zinke in 1805. The *Medical Museum*, published in Philadelphia nearly a century ago, says the action of hydrophobic matter, when introduced into the veins of animals of the lower order of creation, was explained, and the steps were pointed out which should be taken when the poison has entered into the framework of a higher order of creation—human beings. The reference given by "J. C. M." to support his statement is the *Medical Museum and Philosophical Register*, Vol. III, pages 102, 103 and 104, conducted by John Redman Coxe, M. D., year 1807. The article is entitled "Observations on Hydrophobia." It gives an account of the experiments of Dr. G. G. Zinke at Jena, who took the saliva from a dead mad dog that had bitten other animals, and with it inoculated another dog on both forelegs. On the tenth day madness developed. A second dog was inoculated with saliva diluted with a strong solution of arsenic in water. On the third day the animal appeared somewhat indisposed, and the wounds were found with inflamed edges, and covered with a scab under which there was a little matter. No symptoms of hydrophobia followed. A cat was inoculated, the saliva being diluted by tincture of cantharides. The cat went mad, and was destroyed. A rabbit was inoculated with saliva mixed with a drop of volatile alkali. The wound was washed with the alkali, and covered with linen soaked in it. On the eleventh day the rabbit became mad. Another rabbit was inoculated with mad-dog virus, diluted with healthy saliva. The wounds were washed with strong soap-er's lye two hours afterwards, and again two hours later. No hydrophobia developed. A dog was inoculated with the saliva, diluted with a little water in which phosphorus had been rubbed. The wounds were bathed with phosphorus water. Scabs formed, and the dog seemed heavy and without appetite; but these appearances went off, and hydrophobia did not ensue. In five cases of the bite of a mad dog, Dr. Zinke successfully rubbed the wounds with a toothbrush wetted with strong soap-er's lye, after which incisions

were made in them. The patient was then placed in a warm bath, or washed all over in soaper's lye and soap-suds. He was then put into a warm bed, and warm dilutents administered. After the wounds had ceased to bleed, white arsenic, mixed up into a paste, was laid upon every point of the wound. Phosphorus dissolved in ether was given internally. The application of arsenic was regarded as a real improvement in the treatment of the wounds.

Treatment.—Very many agents have, at different times, been lauded as cures for this fearful disease, but with few exceptions they have all left the patient to die. The *Turkish bath* has some advocates. Joseph Knebla, of Milwaukee, had all the symptoms of hydrophobia and recovered. He was kept for five hours in the sweat-room at 150° F., and the next day for two hours more. He paid no attention to the bite until he experienced the prickling many days after, with a swelling of the throat, restlessness and inability to swallow.

"H. H." writes concerning an alleged cure of hydrophobia:

M. Buisson has written to the Paris Academy of Sciences, to claim as his a small treatise on hydrophobia, addressed to the academy as far back as 1835, and signed with a single initial. The case referred to in that treatise was his own. The particulars and the mode of cure adopted were as follows: He had been called to visit a woman who for three days was said to be suffering under this disease. She had the usual symptoms—constriction of the throat, inability to swallow, abundant secretion of saliva and foaming at the mouth. Her neighbors said that she had been bitten by a mad dog about forty days before. At her own urgent entreaties she was bled, and died a few hours after, as was expected.

M. Buisson, who had his hands covered with blood, incautiously cleansed them with a towel which had been used to wipe the mouth of the patient. He then had an ulceration upon one of his fingers, yet thought it sufficient to wipe off the saliva that adhered with a little water. The ninth day after, being in his cabulet, he was suddenly seized with a pain in his throat, and one, still greater, in his eyes. The saliva was continually pouring into his mouth; the impression of a current of air, the sight of brilliant bodies, gave him a painful sensation. His body appeared to him so light that he felt as though he could leap to a prodigious height.

He experienced, he said, a wish to run and bite, not men, but animals and inanimate bodies. Finally he drank with difficulty, and the sight of water was still more distressing to him than the pain in his throat. These symptoms recurred every five minutes, and it appeared to him as though the pain commenced in the affected finger and extended thence to the shoulder. From the whole of the symptoms he judged himself afflicted with hydrophobia, and resolved to terminate his life by stifling himself in a vapor bath. Having entered one for this purpose, he caused the heat to be raised to $107^{\circ} 36' \text{ F.}$, when he was equally surprised and delighted to find himself free from all complaint. He left the bathing-room well, dined heartily, and drank more than usual. Since that time, he says, he has treated in the same manner more than eighty persons bitten, in four of whom the symptoms had declared themselves, and in no case has he failed, except in that of one child seven years old, who died in the bath. The mode of treatment he recommends is that the person bitten should take a certain number of vapor baths, (commonly called Russian,) and should induce every night a violent perspiration, by wrapping himself in flannels and covering himself with a feather-bed; the perspiration is favored by drinking freely of a warm decoction of sarsaparilla. He declares, so convinced is he of the efficacy of his mode of treatment, that he will suffer himself to be inoculated with the disease. As a proof of the utility of copious and continual perspiration, he relates the following anecdote: A relative of the musician Gretry was bitten by a mad dog at the same time with many other persons, who all died with hydrophobia. For his part, feeling the first symptoms of the disease, he took to dancing night and day, saying that he wished to die gayly. He recovered.

M. Buisson also cites the old stories of dancing being a remedy for the bite of a tarantula, and draws attention to the fact that the animals in whom madness is most frequently found to develop itself spontaneously are dogs, wolves and foxes, which never perspire.

Wet pack and cold baths have been thought effective, but there is no positive evidence of such cures, nor do we know that dry oxygen will accomplish any more.

Elecampane has long enjoyed a reputation as curative in rabies, and a physician on the Eastern Shore of Maryland claims to have cured his own son and others by its use in milk.

Camphor was found by Dr. Claiborne, of Virginia, to afford immunity from the effects of strychnine in dogs, and might give some relief to the hydrophobic sufferer if administered in doses sufficient to insure its antispasmodic action, say in 10 to 15 grain doses every two hours. Dr. Graves, of Dublin, used it to control the delirium of low fevers, and Dr. Ringer says "to control delirium, camphor must be given in 20 grain doses every two or three hours, and its effects are to be watched."

Opium is anodyne, and in full doses antispasmodic, and in substance, or in some of its preparations, will surely give immense comfort; nor would there be great harm done if the remedy were pushed to the verge of full narcotism in cases where the sufferings are great. The writer in 1875 brought a case of severe traumatic tetanus to a successful ending after six weeks by using every two hours during the day 2 grains of opium with 15 grains of assafoetida, and during the night at the same intervals, giving 30 grains of chloral hydrate with 30 grains of bromide of potash in camphor water, stopping the doses from 8 P. M. until midnight, so as to allow the approaching narcotism to let up before alternating the remedies. This patient was well nourished throughout the attack by strong beef-tea and rich milk taken through a rubber tube, he having control only of the muscles of the throat and chest so as to enable him to suck. Morphia given hypodermically may be regarded as our main reliance for controlling both pain and spasms in hydrophobia, and can be easily managed; and considering the almost certainly fatal result, would it not be as well to give the wretched patient the full benefit of euthanasia in doses sufficient to enable him to pass off free from suffering?

Calabar bean has proved to be the most effective of all drugs in relieving tetanus; and in 1875, sixty-three cases of the traumatic form are known to have been treated by it, with the report of thirty-three recoveries; and since that time the success by the use of *physostigma* has been much increased, the dose having been $\frac{1}{8}$ grain of the extract repeated every quarter of an hour until the physiological effects of the drug were obtained, as shown by cessation of the spasms. If efficient

in alarming cases of traumatic tetanus, why may we not, with much show of reason, anticipate from it some good in hydrophobia? The alkaloid may be given hypodermically in $\frac{1}{65}$ of a grain.

Bibron's Antidote once had quite a reputation in antagonizing the poison from the bite of the rattlesnake.

Xanthum spinosum.—Dr. Grzyala, of Krivoe-Ozero, Poland, claims for this drug success in his hands in every case, even in warding off the disease.

Woorara, or arrow poison (curare), has been used in this affection always with the effect of relieving or suspending the spasms, and in three cases it is said to have actually effected cures in doses of $\frac{1}{10}$ grain of the watery extract, or $\frac{1}{100}$ grain of the curarine, its alkaloid; and Dr. Farquharson, of St. Mary's Hospital, says: "in hydrophobia it also exerts a good effect in relieving the violence of the convulsions and reducing their frequency."

Chloral hydrate was found by Dr. Gunning to control the active symptoms completely, though the patient finally died. It is wonderful to what extent chloral narcosis can be carried without injury to the patient. Dr. Ross, of London, says that "Morphia under the skin and chloral appeared to do most good, giving quiet sleep for several hours." This drug may be pushed to narcotism, and yet the patient be aroused long enough to partake of food, and relapse into sleep again. In cases like hydrophobia and tetanus we must resort to heroic remedies in heroic doses, or we will lose our patients.

Chloroform and Ether afford relief for the time, but the end is the same; still true charity would suggest to let the patient pass away under their tranquilizing influences.

Toal's Method.—Dr. D. D. Toal offers a formula for the prevention as well as for the treatment, requiring thirty days' steady use. In one instance, he says, the injection cured a terrible case. He asks only for the credit of its discovery. His plan is to cauterize with strong nitric acid, and dress with an ointment composed of $\frac{1}{2}$ drachm of belladonna ointment, to which $7\frac{1}{2}$ drachms of common resin are

added. To the adult he gives internally a teaspoonful after each meal of the following mixture :

Ry. Kali iodidi ʒiij.
 Tinct. cinchon..... ʒij.
 Syr. simplicis..... ʒiv.

M. S.—For a child one to seven years old, half teaspoonful; for a child seven to twelve years old, 1 to 2 teaspoonfuls.

In other words, from 2 to 5 grains of the salt to a child under seven years old, and 5 grains to one from seven to twelve years old. The treatment is to be continued for one week, even where the dog is not rabid, as he supposes the virus of an angry dog capable of producing hydrophobia in man. When rabies is manifest, the treatment is to be kept up for three weeks. In such cases the fluid may be injected with good effect in doses of from 15 to 30 drops every hour.

Finally, it may be well to state that the famous *mad stone* has long had many advocates, but as a rule the medical profession has no confidence in its so-called virtues.

I will add that I would expect effective cauterization from the crystals of *corrosive chloride of mercury*, from its power not only of quickly coagulating animal fluids, but of destroying at once all germs with which it comes in contact, to do good; besides, it may be freely used without fear of its spreading, as would be the case with nitric acid and caustic potassa, and without giving rise to much pain.

119 N. Charles Street.

ART. III.—**Genital Irritation as a Cause of Reflex Nervous Phenomena—Some Cases in Point—One of Singultus.** By R. M. SLAUGHTER, M. D., Theological Seminary, Va.

An article on this subject from Dr. Lewis A. Sayre, in the *Virginia Medical Monthly* for September, 1885, calls to mind some cases of like nature that have occurred in my practice, which may, I think, be of sufficient interest to justify my offering them for publication. These cases illustrate some of the reflex troubles that may arise from genital irritation,

and the importance of its early recognition and removal. These cases occurred while I was practicing in Madison county, Va.

Case I was a colored male infant, one month old. I was called to see this infant in October, 1881, and found that he was having frequent convulsions, one of which I witnessed; it was quite violent. His urine escaped in drops. The prepuce was, to all appearances, a closed sack over the glans penis, the aperture through which it escaped being so small as not to be readily discovered. I performed the usual operation of circumcision, which was followed by immediate and permanent relief.

Case II.—G. W., colored, aged 5 years. My notes of this case having been lost, I can only give from memory a brief account of it. I first saw this boy in July, 1881, and upon superficial examination, I was led to think it might be a case of vesical calculus. The boy was weak and emaciated; the abdomen much enlarged—clearly due to the enlargement of the bladder and thickening of its walls. There was also vesical catarrh and difficulty in free urination, and almost constant dribbling of urine. In a second and more careful examination, having the patient under chloroform for the purpose of sounding for stone, I discovered a congenital phimosis, the prepuce being adherent to the glans by a band about one-sixth of an inch wide, extending around the circumference of the glans, about midway between the meatus and corona. Careful sounding gave no evidence of the presence of stone. I then diagnosed the case to be one of congenital phimosis, giving rise to retention of urine, vesical irritation, and hypertrophy of the muscular coat of the bladder, associated with symptoms analogous to those of catarrh and vesical calculus. The phimosis was readily relieved by breaking up the adhesion, by leaving the prepuce free and easily movable over the glans. Circumcision did not seem to be necessary. The catheter was used as often as I could see the patient; an abdominal supporter was applied, and internal remedies were given. This treatment was followed by some improvement, but the bladder troubles had taken such firm hold, that with the attention I was able to give him, the improvement did not prove permanent. The child died some time afterward from increase of the vesical troubles. Had the circumstances of the patient been such that he could have had the advantages of hospital treatment, or even had he lived near enough to me to have made it possible for me

to see him every day (in fact, it would have been necessary to have seen him twice a day at first), I think the result would have been different.

The only report of similar conditions following phimosis I have ever seen, prior to those first given by Dr. Sayre, is an extract in the *American Journal of Medical Sciences* for October, 1861. This extract is from a paper, read before the Medical Society of London by Mr. Price, on "Congenital Phimosis Considered as a Frequent Cause of Irritation of the Urinary Organs of Young Children, and the Importance of its Early Recognition and Removal," and reported in the *Lancet* of May 4th, 1861.

The next case, though somewhat of a different nature, may, I think, be classed under the same head.

Case III.—J. L., white male, aged 73 years. I was called to see this man February 7th, 1883, and found him suffering with constant and most annoying singultus, which he said he had had constantly for a week, and which was preceded by severe chill and fever. There was great irritability of the neck of the bladder, with constant desire to pass water, but when any was passed, it was with great pain and difficulty. The kidneys were acting badly, the tongue was coated, and his bowels constipated. He had no fever then, nor at any time thereafter. He represented that he had a stricture of years' standing, which had been treated, but never operated upon. From all that I could gather of the history of the case prior to my taking charge, I inferred that he had taken cold, which gave rise to stricture or urethral fever; this, in turn, was followed by irritability of the neck of the bladder and reflex singultus. The course of treatment consisted in the use of bromidia, sweet spirits of nitre in an infusion of flaxseed, hot application over the hypogastrium, and a small dose of calomel and Dover's powder at night. This treatment produced free action of the kidneys, and temporary relief of the hiccough. On the 9th, the patient was much worse—the hiccough having returned, and continued all night; the irritability of the bladder was intense, and pulse was very weak. Dr. E. W. Row, of Orange, Va., saw the patient with me, and having with him some nitrite of amyl, we gave it a trial, but with no other effect than an increase in the strength of the pulse. The same treatment was continued, with the addition of the one drachm of chloral to each ounce of bromidia, to be given in teaspoonful doses.

On the 10th, he was no better, and without hope of recovery; nor did I think he would live through the night. His kidneys were acting freely enough, but there was no amelioration of the other symptoms. Treatment continued, but bromidia and chloral mixture increased in strength to four drachms of the latter to one ounce of the former. In addition, I ordered a suppository of extract of belladonna, one grain to be used at night.

On the next morning I found his condition much more favorable, having rested fairly well during the night. From this his improvement was gradual, but constant, he only having slight attacks of hiccough on getting up to urinate, which he could not be prevailed upon not to do. The chloral and bromidia mixture was discontinued entirely on the 13th. The suppository and five grains of quinine at night, with fifteen-drop doses of sweet spirits of nitre three times a day, were given for several days, by which time he was quite recovered. Stimulants were freely used.

There is no doubt in my mind that the local effect of the belladonna saved this man's life; for the improvement began with the first application, and at a time when the case seemed an utterly hopeless one, the chloral having been pushed to the extreme limit consistent with safety. Morphia was clearly contra-indicated in the case. There was never, during the progress of the case, the slightest indication of inflammation. He would not consent to have the stricture operated upon, but has continued in good health, for a man of his age, up to October, 1885, which was the last time I heard of him.

ART. IV.—**The Ice-Cap as a Therapeutic Measure.** By THORNTON PARKER, M. D. (Munich), Newport, R. I.

Few of the text-books of the medical profession afford information concerning minor details. Matters connected with the every-day life of the physician's work are sadly wanting in most of our books of reference. We turn to works on practice of medicine for information concerning ailments that occur in every-day life, but find them wanting, because they may be classed with surgery; then looking into

our surgical works, they are missing there, because they ought to be found in works on practice.

Tonsillitis is a common disease, but the otherwise excellent work of Prof. Bartholow on the *Practice of Medicine* does not afford any information concerning its diagnosis or treatment! And so it is in looking up the subject in almost all our systematic works; the result is the same in so many cases—disappointment and vexation. We are often hurried for needed information, but we know not to which of our books to refer, and the unrewarded search makes one disgusted with most of our authors, and forces us to believe that many books are made to sell, and much that fills them is simply stuffing to make a book of good appearance. This is no exaggeration. We hear these complaints only too often. *Ziemssen's Encyclopedia* is the work to which we can refer almost always with satisfaction, and never without instruction.

Recently we have had occasion to look up the subject of ice as a therapeutic measure. Let any one look over our medical works for information on this little point to prove how poverty-stricken our books on medical instruction are of practical matters. An ancient poet has written that for the wise man no details are too humble; and certainly our modern writers might, for our benefit, afford the minutest details without injuring their position. The truth is that many fear to descend into details, but pride themselves on grand operations, or to split hairs in a maze of pathology. For our own part, we read gladly matters of detail; we are students still, although many years have flown by since we graduated, and students we will remain as long as life lasts.

Few writers have contributed more of practical value to the busy practitioner, in works on treatment, than Fothergill, in his "Handbook." In a book of less than seven hundred pages he has given us a store of valuable information. The short article on "body-heat and fever"* contains very much that is instructive; and almost every method of using ice is considered; but only incidentally is that valuable application, the ice-bag, referred to at all. We do not mean

**Handbook of Treatment*, Fothergill, p. 116, *et seq.*

the spinal ice-bag, but the head-cap, or "bladder of ice," as he calls it.

In the New York *Medical Record*, of March 3d, 1883, the use of the ice-bag in pulmonary diseases has been referred to by us; but its value when applied to the head is the matter which we consider worthy of attention, and which has unfortunately received so little notice in the medical works to which we have access. Liebermeister, Lendwurm and Gietl have for many years taught and written concerning the value of external cold in the treatment of pyrexia. The use of cold in so many diseases is common on every hand to-day. The bath of cold water is required by a large number of successful practitioners all over the world. The value of ice internally is denied by very few; but how seldom in this country do we see the useful ice-cap used to reduce bodily heat? A strong prejudice does exist against its employment, and it is not to be wondered at.

Referring to our catalogue of instrument makers and druggist supply-houses, we find the "caps" pictured therein as made of the abominable torment of vulcanized rubber. The caps commonly on sale in our drug-stores are expensive to begin with; but worse than that, they are miserable failures for the purpose they pretend to be useful for. They are very heavy and clumsy, and distress the patient, and are either always too cold or too hot. Their great weight is often positively injurious to the patient. The bladder from the butcher is a dirty make-shift, and should not be tolerated. The ice-cap so commonly in use in Germany is a very different arrangement. It is made in excellent shape, very light for the head, and the material is as *thin* as it is possible to have with safety.

In the German hospitals, *every* bed has its frame-work for the proper attachment of the ice-cap. This allows the ice-bag to hang suspended from a tight cord directly over and just touching the patient's head, so that he can turn about in bed without upsetting the cap and deluging himself in ice-water. It is so arranged that the patient suffers no inconvenience, and never wearies of the delightful application, so necessary for his early and satisfactory recovery.

In almost every case where the temperature rises above normal, in surgical or medical wards, the ice-cap is used, and with great benefit. The contents of the cap of course vary in the proportions of ice and water, according to the nature and severity of the illness, but the effect is almost always good, and the bodily temperature is surely and decidedly lowered. The absence of the ice-cap in American sick-rooms has always been a mystery to us, and its infrequent use by American medical practitioners of our acquaintance has been a source of increasing wonder. It is worth while to bring this subject into notice, and to assure those who have been disappointed with the miserable articles so generally on sale in our drug-shops, that a very fair article can be purchased of the Davidson Rubber Company, and also of Messrs. Tiemann & Co., of New York, and probably elsewhere.*



DAVIDSON RUBBER CO.

every disease where the temperature rises above the normal, the ice-cap, if of proper material, and if properly applied, is indicated.

Where the necessary attachments to the bedside to properly support the ice-caps are lacking, a picture-nail in the wall, or a hook screwed into the ceiling, is all that is required to aid us in properly adjusting the ice-cap.

To see the temperature reduced even a trifle, and to notice the improvement in the condition of the patient—the increased mental vigor, and the affording of considerable relief—all these are sufficient to make us appreciate the value of this agent in the treatment of disease. The successful practitioner must bring to his aid all that will benefit his patient, if within reasonable possibility, and the trifling cost of a good ice-cap for use amongst the poor will never be a loss to the practitioner. Experience has taught us that the use of cold applications in the treatment of disease is of the utmost importance, and that amongst our most faithful and valued allies the ice-cap occupies, and always will retain, a post of honor, which it has won by true merit.

*Also of the Virginia Rubber Company, recently organized in Richmond, Va.
—*Note by the Editor.*

Professor Frank Woodbury, of Philadelphia, writes that he "had the ice-cap in constant use, during his term of service in the German Hospital, in cases of congestive headache, typhoid fever, hyperpyrexia, sunstroke," etc. He also applied it in cases of pulmonary hæmorrhage, pneumonia, hæmoptysis, and some cases of phthisis. He expressed himself as having been very well satisfied with its effects.

ART. V.—**Dipsomania, and Its Treatment.** By EDWARD C. MANN, M. D., Superintendent of Sunny Side Home for Nervous Invalids, Brooklyn, N. Y.

The study of inebriety as a disease, and not as a moral lapse, has been superficially considered. The only treatment which is ever successful in this disease consists of isolation and proper medical treatment, with withdrawal of the poison the man is taking. We have to treat, in the dipsomaniac, a habit independent of control, a disordered mind and a perverted will, and a diseased body. Inherited tendency is one of the great causes of this disease.

Respecting race tendencies to inebriety, it will always be observed that mixed races, where the population is of a composite character, like our own, suffer more from dipsomania than unmixed races. If asked for a proof of my assertion, I would cite the exemption of the Jews from the disease of inebriety.

Mind, will and body are all diseased, and all have to be gotten into a normal condition in the disease of inebriety. In my personal relations to this disease, it has been my earnest effort, by the careful study of cases, individually and collectively, and by the comparison of statistics here and in Europe, to get the history and management of the disease of inebriety placed on a footing of scientific truth and accuracy, which illustrates the principles and treatment of insanity; and therefore, in my work on the latter subject, have devoted an entire chapter to dipsomania, and its careful consideration. I think that the position of inebriety as a physical disease

should be one of authoritative science. Equally, if not more favorable results, may be expected in inebriety than in insanity, when subjected to prompt and intelligent care and treatment away from the patient's own home. I never waste my time in treating a case of dipsomania in the seclusion of the patient's home. In the seclusion of *my* home, I can cure him. By putting my patient under hospital restraint and supervision in the early stages of the disease, it can be radically reached and overcome. It seems very hard to make the most intelligent part of the community heed and observe this. A lady whose husband was an inebriate in the early stages of the disease, and who I was advising to send her husband immediately for treatment, said to me that she was disappointed and discouraged, because the various remedies prescribed by her family physician had done no good, and had given so little relief. She did not, and seemingly could not appreciate that it was the total loss of will power, combined with an irresistible craving for stimulants, which, while under no proper restraint, prevented her husband from getting any better while he had free access to alcohol.

Alcohol is a poison just as much as opium, arsenic, or strychnia; and the only reason why it is not universally condemned is that it is universally drunk in moderation. Alcohol, even when taken in moderation daily, will impair the efficiency of the man's brain, sooner or later, in seventy-five men out of every hundred. It is the exceptional American that can habitually drink in moderation, and not in some way pay the penalty. Of course there are cases in which the proper use of alcohol intelligently prescribed by a physician promotes digestion and builds up the system; and in diphtheria, the fevers, etc., we must give stimulants; but I am talking about the habitual moderate use of alcohol in health. We don't need it, and it does us no good. It confuses the finer operations of the brain.

The essential element in inebriety is the craving for alcohol, the result of disease, beyond the power of will. Vital force is impaired by alcohol. A man's power of endurance is very much lessened. He is more easily fatigued by men-

tal or bodily exercise than the abstainer, and there is a marked disinclination to apply the mind vigorously in any direction. The brain and whole nervous system are at first diseased in function, and later, in structure.

A man is very fortunate when liquor goes to his head readily, as he is likely to be restrained from indulgence when consequences may be serious or disgraceful. There is no vocation in life in which a liquor-drinker can cope with a temperate man. Statistics prove that a man of 20 who is temperate has before him as his average of life 44 years, 2 months; *vice versa*, the drinker of 20 years has an average life before him of 15 years and 6 months. The drinking man transmits to his child, whom he loves, a tendency to inebriety, or to insanity, with a sad certainty. I have traced this a great many times in my own cases, which resemble those every observant physician sees.

There is one very hard class of cases to treat—a class of young persons depraved in all their instincts, who have no desire to be reformed or cured.

In the other class of cases we may overcome the depraved appetite or craving, and remove, by treatment directed to the centric nervous system, the diseased condition upon which it depends, and in many cases we may get radical and permanent cure.

The inebriate is what he is by virtue of a complexity of causes. He may, as I have shown, inherit the propensity for drink; some brain disease may be the cause of it; causes similar to those preceding insanity may bring it about—such as sunstroke, injury to the head, domestic trouble and grief, and reverses of fortune, and habitual indulgence in any form of liquor, light or otherwise—may induce the disease of inebriety.

In every State in the Union, there ought to be well regulated hospitals for dipsomaniacs, free from political management; and to this end a bill like the following ought to be introduced into State Legislatures, with special provisions for the erection and maintenance of such hospitals—viz: “That excessive intemperance is, in many cases, a symptom of a special form of insanity, which requires special treat-

ment, with a view—first, to the recovery of those affected, and second, to the protection and advantage of them and of society. That in the present state of the law such treatment is not attainable until a man has reached an incurable stage of the disease of inebriety; and that it is desirable that legal provision should be made to render it attainable.”

There is less intemperance as a vice, and more dipsomania, than there used to be. This is a scientific fact. There is a tendency in the modern American who drinks to more positive damage to his brain, although it may not appear in such acute and violent forms, than in the case of his ancestors of one or two generations ago.

I have more than once been asked when the disease of inebriety may be considered as established. To this I would answer, that when the first inordinate desire for alcohol is experienced, the condition or disease has commenced. The first unnatural longing for drink is essentially of the same nature as the most inveterate and uncontrollable desire. The difference is only in degree. My experience with the disease of inebriety leads me to believe that a large proportion of inebriates in a well conducted institution can be radically cured, and can go again into society with health re-established, diseased appetites removed, with principles of temperance well grounded, and thoroughly understood, so that they will be afterwards safe and sober men.

We can always refer the disease of inebriety to morbid causes, and to a diseased state of the system. Its most prominent symptoms are great nervous irritability or restlessness, unnatural sensations, and an uncontrollable desire for alcohol and frequent fits of intoxication from its use. In the advanced stages of the disease, nothing satisfies but complete intoxication.

Treatment.—We treat inebriety on the principle that it is a disease, and curable as other diseases are. When a patient is admitted for treatment, a careful record is made respecting the following points: Nativity, age, sex, social position—married or single, etc.—family history, temperature, special sense; whether the habit of inebriety is occasional, periodical, or habitual; duration of habit; predisposing and ex-

citing causes. The nervous system is investigated for epilepsy, neuralgia, chorea, mental diseases, muscular tremor, insomnia, paraplegia, hemiplegia, etc. Any existing cachexia is investigated—such as tubercle, syphilis, cancer, malaria, gout, and rheumatism. The sexual system is investigated; the circulation is investigated. In women, any menstrual irregularities and uterine diseases are investigated and treated. Any displacements of the uterus are reduced. The genito-urinary system is examined. The whole digestive system, stomach and alimentary canal are investigated for dyspepsia, gastric catarrh, and the state of the liver is inquired into for cirrhosis or fatty liver. The state of the intellect is most carefully studied, and all morbid states antagonized by the proper therapeutical treatment.

As soon as a patient enters the "Home," all stimulants are dropped. In a practice of fifteen years, we have never once seen any harm result from this abruptly breaking off the ingestion of a poison. The patient has the most careful nursing, is made to sleep, has the physiological antagonists to alcohol administered, and the free use of electricity builds up the nervous system, and is such a stimulus to the nervous system that the patient does not suffer from the withdrawal of alcohol. There are occasional cases—perhaps one in fifty—where for a day or two we have given some mild stimulus, but such cases are very rare in my experience where such a course is indicated. Peptonized beef and peptonized cod-liver oil and milk are freely given, and also the phosphates. The patient is not allowed, until the lost will power is restored, to go out without a gentleman or lady accompanying him or her.

It requires considerable time to make a thorough cure, but it can be done in a large proportion of cases, provided the patient stays the required length of time.

There is one very encouraging class of cases—those who realize their bondage to alcohol, and who are desirous to be cured, and who come prepared to co-operate with the physician in all his endeavors to cure them. Another class come to please husband, wife, or child; these may generally be brought into accord with the physician, and will after a time

co-operate with him. There is another class, hard to treat, because they will not acknowledge they have any disease; don't want to be cured, but only temporarily relieved, and who will drink again at the first opportunity. Every inebriate must understand that, after he is cured, it is a great folly to be a moderate drinker, as it would be, after an attack of diphtheria, to deliberately go back to the house where it was contracted and live there before an examination by the proper sanitary authorities. A man or woman who has suffered from the disease of inebriety must be ever afterwards a *total abstainer*, or the disease will return again. This is our peremptory advice to all such patients.

204 *Leffert Place*.

Clinical Reports.

Large Incised Wound, and Escape of Intestines on the Floor—Replacement, Suture, and Recovery. By W. J. HARRIS, M. D., Member Virginia State Board of Medical Examiners, etc., Blackstone, Va.

Henry Vaughan, farmer, aged 66, weight about 180 pounds, health good, was stabbed July 14, 1865. He had just risen from the breakfast-table when the wound was given. I found him, about two hours after, lying on a very dirty floor, where he fell. Skin cold, pulse very weak, and every indication of extreme collapse. The knife had entered a little below a line from the crest of the left ilium to the umbilicus, cutting upwards and inwards for about four inches. A large mass of the small intestines, twelve to fifteen feet long (as a bystander remarked—"enough to fill a wash-tub"), was lying on the floor by his side, the bowel cut, and contents oozing into the mass. The case appeared entirely hopeless, but I had to try to do something, even for the sake of humanity. Small quantities of whiskey and laudanum were given, and hot bottles were applied to his extremities. He soon began to revive, but insisted that he should make his will before I interfered to dress his wound.

After that was done, which consumed an hour or more, I commenced my dressing. The dirt and contents of the bowels mixed through the intestines, rendered it necessary to wash them. After applying a napkin to the wound, find-

ing a long (longitudinal as to the gut) slit ($2\frac{1}{2}$ to 3 inches) in the bowel, I stripped out all the fecal matter through the wound, and washed the bowel perfectly clean in warm water. I then put in two sutures of silk, tying those two with the knot on the inside of the bowel, and cut the knots close to the mucous surface. The last suture was tied on the outside, and the ends were left long. The bowels were then carefully returned, and the two cuts (in the bowel and in the abdominal wall) were placed in exact apposition, the ends of the lower suture being drawn out at the bottom of the abdominal wound, and well sutured. A water dressing and a cotton bandage around the abdomen were applied, and he was slid on a mattress by his side. The whiskey and laudanum were continued at short intervals. Only milk and chicken broth were given as diet.

After the fourth day, reaction being complete, the whiskey was stopped, but opium was continued regularly, to keep him still and prevent the peristaltic motion of the bowels.

On the ninth day, an enema was given, which brought a good evacuation. The wound had healed the whole length by first intention, and when I drew out the lower suture, only a drop or two of pus followed it. The hole the ligature came out of was lightly touched with argenti nitras, and in a few days this was entirely well.

After reaction was entirely established, the case progressed in a satisfactory manner. There was just sufficient adhesive inflammation to unite the cut surfaces, and to throw out lymph around the wound to give strength to the union. The bowels at once became regular, and there was not the slightest obstacle to the passage of any ingestion.

August 2d (fifteenth day), I found my patient walking about his yard, in every respect well, and continued to go where he pleased from that time. I applied a leather pad over the wound to protect it from inside pressure. This was worn for about six months. He lived six years afterwards, attended to his usual farm work, and walked twelve miles a few days before his death. He died suddenly from an attack of apoplexy of the brain, about January, 1872.

This case happened over twenty years ago, before abdominal incisions and antiseptics had their boom. If asked why I did not use antiseptics, I reply that we had no antiseptic sprays, or iodoform gauze, and we managed to do *without them*. Cold water and opium are, at last, the great remedies for wounds.

Proceedings of Societies, Boards, etc.

VIRGINIA STATE BOARD OF MEDICAL EXAMINERS.

In obedience to the call by the President (Dr. Dabney), the first semi annual session for the current year (the second year of the organization) of the Virginia State Board of Medical Examiners assembled in the Hall of the House of Delegates, in Richmond, Va., at 10 A. M., Wednesday, April 7th, 1886. After the meeting had been called to order, and prayer by Rev. Dr. Newton, of Monumental Episcopal Church, of this city, the roll was called. The following

MEMBERS WERE IN ATTENDANCE DURING THE SESSION:

Drs. Wm. C. Dabney, Charlottesville, *President*; H. Grey Latham, Lynchburg, *Vice-President*: Hugh T. Nelson, Charlottesville, *Secretary and Treasurer*.

Drs. J. Herbert Claiborne, Petersburg, C. C. Conway, Rapidan, Chas. R. Cullen (P. O. Richmond), W. J. Harris, Blackstone, L. Lankford, Bowers, Richmond A. Lewis, Richmond, Rawley W. Martin, Chatham, Thomas J. Moore, Richmond, Herbert M. Nash, Norfolk, Henry M. Patterson, Staunton, Jesse H. Peck, Hampton, Hugh Stockdell, Petersburg, Hugh M. Taylor, Richmond, and Oscar Wiley, Salem.

In accordance with the act amended during the recent session of the Legislature, the Governor has appointed the following homœopathic physicians to be additional members of the State Board of Medical Examiners, whose special duty it will to examine those applicants for license who propose to practice according to the Homœopathic School: Drs. G. A. Tabor, of Richmond, G. L. Stone, of Richmond, W. P. Jones, of Petersburg, F. Webster, of Norfolk, and W. A. Douglas, of Norfolk city. Of these five, Drs. G. A. Tabor and G. L. Stone, both of Richmond, were the only two in attendance.

Since the last report (made in the October number, 1885, of the *Virginia Medical Monthly*) of the proceedings of the Board, when thirty-three had been licensed, the following named gentlemen (8) have passed satisfactory examinations before Committees of three Examiners of the Board, and have been granted certificates entitling them to receive licenses to practice in Virginia—making the total number of doctors licensed by the Board prior to this date, 41:

RECEIVED CERTIFICATES SINCE OCTOBER REPORT.

Drs. Geo. A. Tabor (homœopath), James S. McIlhaney, W. H. Miller, E. P. Turner, H. A. Nash, C. F. Rinker, Robt. D. McIlwaine, and W. E. Ferebee.

Dr. Tabor is the first and only applicant of the Homœopathic School who has as yet presented himself for license.

The reading of the minutes of the last session of the Board was postponed in order to allow applicants for examination outside of the Hall to come in and go to work. Thirty-four applicants presented themselves, among whom was one colored graduate in medicine—the second colored graduate who has yet presented himself for examination.

Up to the present time (including this session) the total number of applicants who have attempted examination before open sessions and committees of the Board has been about 100.

The examinations began about 11 A. M., after the announcement of the following

PLAN OF EXAMINATION:

1. Examination questions and answers are to be in writing or printing.
2. The applicant is required to answer at least three-fourths of the questions satisfactorily, and show a fair, general knowledge of all the branches upon which he is examined.
3. Applicants can neither give nor receive information relating to the subjects under consideration during the examination.
4. No examiner is permitted to tell the applicant the result of his examination until after the examinations are all over and have been passed upon by the Board.

EXAMINERS IN SECTIONS,* AND THEIR QUESTIONS.

Committee on Chemistry.—Drs. R. A. Lewis, Hugh T. Nelson, Jesse H. Peek, and S. W. Dickinson.*

Ques. 1. How is chemical change resulting from bringing together different kinds of matter to be distinguished from mere mixture without chemical change? Mention the chief kinds of chemical change which matter undergoes.

Ques. 2. What are the essential features and construction of the galvanic battery? What are the effects produced by the current of electricity it affords?

The star () after the names of Examiners indicates that the parties named were not in attendance upon this session. The vacancies were filled *pro tem.*, as far as possible, by the appointment of other members of the Board present.

Ques. 3. Give the best way of preparing chlorine gas. Tell how it destroys zymotic poisons. Explain the process of bleaching by chlorine.

Ques. 4. Test urine for sugar, albumen, the urates, and phosphates.

Ques. 5. Give the composition of the hypothetical metal ammonium. Tell why it is supposed to be a metal. Give the symbols of ammonia. Tell how it is prepared. Give its chemical and physical properties.

Ques. 6. What oxides of carbon are there? What are their effects when respired by man in large and small quantities respectively? And under what circumstances are these substances liable to be met with, and accidentally respired?

Committee on Anatomy.—Wm. P. McGuire,* L. Lankford, R. D. Huffard,* and Hugh M. Taylor.

Ques. 1. Origin of the right and left carotid arteries:—their courses, divisions, and the sub-divisions, and the names of each.

Ques. 2. Give names and number of the cranial bones. Give composition of bone. Describe minutely the female pelvis, and state the normal diameters.

Ques. 3. Give descriptive and surgical anatomy of the inguinal and femoral regions and hernia; and especially the relation to the latter of the epigastric and obturator arteries.

Ques. 4. Give the descriptive and surgical anatomy of the male perineum, including the penis and deep layer of the superficial perineal fascia.

Ques. 5. Give the collateral circulation after ligation of the common carotid, subclavian, and femoral arteries above and below the profunda.

Ques. 6. Give the general and descriptive anatomy of the peritoneum, its reflections, the parts which are partly and those that are entirely covered by it, and especially the formation of its greater and lesser cavities.

Ques. 7. Give the anatomy and function of the lymphatic system—especially the glands of the inguinal region.

Ques. 8. Give the cranial nerves; the number of pairs, their names, origin, exits, and the distribution of the first four pairs.

Committee on Hygiene.—Drs. J. Herbert Claiborne, Charles R. Cullen, S. W. Carmichael,* and Oscar Wiley.

Ques. 1. State how the temperature of the body and the temperature of the atmosphere, indoors and out of doors, affect human health at different ages of life.

Ques. 2. What is the best method of disinfecting—(a) houses; (b) water-closets and cloacas generally; (c) the clothing and bed-clothing of a patient with an infectious disease? and name some of the most efficient and practically useful disinfectants:—their relative value, and the modes of using them.

Ques. 3. What is the bacillus? And what is the difference between a germ and a spore, and the relative vitality of the two?

Ques. 4. What is the best and most economical mode of purifying water and fitting it for domestic use?

Ques. 5. What is the composition of animal foods? of vegetable, amylaceous or starchy food? of oleaginous food? What are the uses of protein, gluten, caseine and fruit acids?

Committee on Physiology.—Drs. Harvey Black,* W. L. Robinson,* Wm. C. Dabney, and Herbert M. Nash.

Ques. 1. State the distinctive characteristics of albuminous proximate principles, and describe albumen.

Ques. 2. Describe in detail the phenomena of pancreatic digestion.

Ques. 3. Describe phenomena of the capillary circulation.

Ques. 4. State from what sources the heart receives its nerve supply, and the influence exerted by each nerve.

Ques. 5. State the changes which occur in the blood and air respectively as a result of respiration.

Ques. 6. State the origin, function and distribution of the fifth pair of cranial nerves.

Ques. 7. Describe the microscopic structure of the kidney, and the mode of secretion of urine.

Ques. 8. Describe the formation and appearances of the chorion.

Committee on Materia Medica and Therapeutics.—Drs. Robert J. Preston,* C. C. Conway, Hugh Stockdell, and John Neff.*

Ques. 1. Name some of the influences modifying the effects of medicine.

Ques. 2. Name the principal arterial sedatives.

Ques. 3. Give the botanical history, classification, properties and uses of cinchona.

Ques. 4. What are the contra-indications to the use of blisters?

Ques. 5. Give uses and doses of subnitrate of bismuth.

Ques. 6. What are the therapeutic uses of bichloride of mercury?

Ques. 7. What is the principal alkaloid of jaborandi?

Ques. 8. Give the phenomena of acute opium narcosis.

Ques. 9. What is apomorphia? Give its medicinal properties.

Ques. 10. Name the principal diuretics.

Ques. 11. Give the relative dosage for administration of medicines by the mouth, rectum, and hypodermatically.

Ques. 12. Name the three most prompt emetics and their doses.

Ques. 13. Write a formal prescription for turpentine emulsion, dose ten minims.

Ques. 14. Give sources and therapeutics of salicylic acid.

Ques. 15. Give dose of Norwood's tincture of veratrum viride, croton oil, hydrocyanic acid, and the common salts of strychnia.

Committee on Obstetrics.—Drs. Alex. Harris,* Z. G. Walker,* W. W. Douglas,* and O. B. Finney.* In the absence of the entire Committee, Drs. Dabney, Nash, Claiborne and ——— acted.

Ques. 1. Describe the mode of treatment of threatened abortion.

Ques. 2. Describe the mechanism of delivery in face presentations.

Ques. 3. Describe the management of shoulder presentations.

Ques. 4. State the indications and contra-indications for ergot in obstetric practice.

Ques. 5. Give the diagnosis and treatment of post-partum hemorrhage.

Ques. 6. Give the diagnosis and treatment of placenta prævia.

Committee on Practice of Medicine.—Drs. Rawley W. Martin, Bedford Brown,* H. M. Patterson, and W. J. Harris.

Ques. 1. Name the causes (a) of cardiac hypertrophy; (b) of acute bronchitis; (c) of acute Bright's disease; (d) of hysteria.

Ques. 2. Give the pathology (a) of croupous laryngitis; (b) of chronic Bright's disease; (c) of cerebral apopley; (d) of endocarditis.

Ques. 3. Mention the symptoms (a) of cholera infantum; (b) of pernicious malarial fever; (c) of hydrothorax; (d) of acute hepatitis.

Ques. 4. Give the diagnosis (a) of pleurodynia; (b) of variola; (c) of acute pneumonia; (d) of typhoid fever.

Ques. 5. What is the treatment (a) of acute rheumatism? (b) of cholera infantum? (c) of remittent fever? (d) diabetes mellitus?

Committee on Surgery.—Drs. H. Grey Latham, T. B. Greer,* W. D. Meriwether,* and Thomas J. Moore.

Ques. 1. Name the causes and symptoms of septicæmia and pyæmia.

Ques. 2. What is the pathology of aneurism?

Ques. 3. What is the pathology of synovitis?

Ques. 4. Give the symptoms and treatment of shock.

Ques. 5. What is the treatment of epistaxis?

Ques. 6. Give the treatment of iritis.

Ques. 7. Give the diagnosis and treatment of Colles' fracture.

Ques. 8. Give the diagnosis of dislocations, backwards, of the ulna and radius.

Ques. 9. Describe the operation of ligation of the femoral artery in Scarpa's triangle.

Ques. 10. Describe the operation of ligation of the brachial artery in its middle third.

Ques. 11. What is the treatment of gunshot wounds of the chest?

Ques. 12. Give the diagnosis of intra-capsular fracture of the hip-joint.

Ques. 13. Describe the treatment of the same.

Ques. 14. Give the pathology and treatment of carbuncle.

Ques. 15. Describe amputation of the leg by the mixed method.

Ques. 16. Give the pathology of erysipelas.

Ques. 17. What is the treatment of the same?

Ques. 18. Give the diagnosis and treatment of syphilis.

Ques. 19. Describe the surgical treatment of phimosis.

Ques. 20. Describe the methods of resuscitating the drowned.

EVENING SESSION—EXECUTIVE MEETING AT 4 P. M.

The minutes of the last meeting were read and approved, their reading having been omitted at the morning session.

PRESIDENT'S REPORT.—The President read his report, detailing the operations of the Executive Committee of the Board, and other matters of interest, which had transpired since the last session of the Board, at Alleghany Springs. Since that time eleven applicants had been examined by three members of the Board in each case; eight of this number had been found qualified, and three were rejected. Of

the eight thus passed, six were graduates and two were not graduates.

Dr. B. B. Halsey, of Orange county, Va., rejected by the Examining Board at its session in April, 1885, has been indicted by the Grand Jury of that county, and but for some technical error in the "indictment," would have had punishment inflicted upon him for violating the "Law Regulating the Practice of Medicine and Surgery in Virginia." The Courts—both County and Circuit—have sustained the *law* as regards its constitutionality; and a new indictment has already been made out against Dr. Halsey, whose trial will again come off in May.

Two other cases of apparent violation of the "Act Regulating the Practice of Medicine and Surgery in Virginia" had been reported; but the President has been unable to obtain proof that these parties had been practicing for "*remuneration*." One of these had promised to come before the Board, and the other declined to enter practice.

Three new members of the Board had been appointed by the Governor, on recommendation of the Medical Society of Virginia, to fill vacancies—namely, Drs. T. J. Moore and Hugh M. Taylor, of Richmond, and Dr. H. M. Nash, of Norfolk; also the five homœopathic members of the Board, called for in the amended "Act to Regulate," etc.—Drs. Stone and Tabor, of Richmond, Webster, of Norfolk, Jones, of Petersburg, and Douglas, of Danville.

The propriety of increasing the number of subjects in which applicants were examined had been suggested, and the attention of the Board is called to the matter.

This report was fully endorsed by the Board.

MINIMUM STANDARD FOR EXAMINATIONS.

Dr. Lewis called up the report of Committee on adoption of a *minimum standard*, and as that Committee had had no meeting, he offered a resolution that *sixty* be adopted as a *minimum standard* on each branch. After considerable discussion, the matter was referred back to the Committee, and $33\frac{1}{3}$ was adopted as a minimum standard for the present session, below which if any candidate fall on any one branch he shall be rejected, though he must aggregate 75 per cent. of the entire questions.

A discussion of the following points in the President's Report then took place at some length:

1st. The propriety of increasing the number of subjects on which examinations are held; or of changing the number of questions on given subjects.

Dr. Claiborne did not think it desirable to introduce additional subjects on which to examine applicants, though he had no objection to changing the number of questions on some of the subjects.

Dr. Taylor favored examination on Gynæcology and Urinary Diseases, and on Ophthalmology, Laryngology and Otology, making two new subjects for examination.

Dr. Martin moved that the questions on *Materia Medica* and *Therapeutics* be decreased from fifteen to twelve, and that the questions on *Obstetrics* be called on *Obstetrics and Gynæcology*, and the number of questions increased up to twelve. Carried.

Dr. Conway moved that the section on *Hygiene* be known as *Hygiene and Medical Jurisprudence*, and embrace six questions. Carried.

Dr. Latham moved that the section on *Surgery*, as such, consist of sixteen instead of twenty questions, the remaining four to be devoted to *Laryngology* and *Otology*. It appearing, however, during the subsequent discussion that the section on *Surgery*, through its Chairman, had the power to introduce question on any branch of surgery desired, Dr. Latham withdrew his motion.

The second point in the President's Address calling for prompt action was "The propriety of allowing the candidate to select three Examiners who might agree on one set of examination questions, and *one examination* passed by the candidate before *one Examiner* in person—the other Examiners passing on the written answers subsequently."

Dr. Claiborne moved that applicants be required to go *in person* to each of the three Examiners; and that this Board do interpret the section of the Act on this subject as disallowing three Examiners to unite in a single examination. Carried.

The examination questions on the subjects other than *Chemistry*—already passed—were now taken up and passed on by the Board, so as to be ready for the applicants. The *Anatomy* questions had to be given before the Board acted on them, but were ratified as herein stated.

The Treasurer's report was read and accepted. It showed a balance of \$241.12 in the hands of the Treasurer. On motion, it was ordered that a sufficient amount to meet current expenses be retained in the treasury, and the remainder be divided among the members of the Board in proportion to the number of miles travelled by each in attending the different sessions of the Board since its organization.

The two following days—to-wit: April 8th and 9th—were spent in conducting examinations, and reporting thereon; and this being the only remaining business, the several Committees were instructed to complete their work, and make their report to the *Advisory Board*. The result of this work is tabulated below.

List of Physicians Licensed April 10th, 1886, by Virginia State Board of Medical Examiners, with the Postoffices and Colleges of Graduation.

Drs. W. G. Belt, Whitmel, Va., Med. Col. of Va.; R. J. Boland (colored), Hampton, Va., Detroit, Mich.; E. S. Brady, Buffalo Gap, Va., Jeff. Med. Col.; C. C. Christian, Urbana, Va., Univ. of Md.; C. L. Cudlipp, Richmond, Va., Med. Col. of Va.; H. W. Dew, Wytheville, Col. Phys. and Surg., Balt.; J. N. Dox, Tye River, Va., Med. Col. of Va.; J. Claude Elsom, Montreal, Va., Med. Col. of Va.; James W. Elsom, Richmond, Va., Med. Col. of Va.; J. F. Fox, Waynesboro, Va., Univ. of New York; R. E. Franklin, Suffolk, Va., Med. Col. of Va.; Moses D. Hoge, Jr., Richmond, Va., Univ. Heidelberg, Germany; W. P. Jones, Jonesboro, Va., Col. Phys. and Surg., Balt.; J. L. Kloeber, Norfolk, Va., Univ. of Md.; Geo. T. Latham, Richmond, Va., Med. Col. of Va.; E. C. Macon, Richmond, Va., Med. Col. of Va.; Wm. Meredith, Gouldins, Va., Med. Col. of Va.; G. P. Moore, Eastville, Va., Col. Phys. and Surg., Balt.; J. A. Norfleet, Franklin, Va., Med. Col. of Va.; J. D. Poindexter, North Danville, Va., Col. Phys. and Surg., Balt.; A. S. Priddy, Keysville, Va., Col. Phys. and Surg., Balt.; S. M. Robinson, Woodlawn, Va., Med. Col. of Va.; L. C. Shepherd, London Bridge, Va., Bellevue Hosp. Med. Col. N. Y.; R. L. Townes, Petersburg, Va., Med. Col. of Va.; J. T. Walker, Gordonsville, Va., Col. Phys. and Surg., Balt.

These 25 names, added to the 41 previously named, bring the total number of those who have passed the Board to date, 66.

Eight applicants were rejected this session, representing four prominent Colleges of this country.

One applicant failed to complete the examination, and withdrew from the contest.

The Board then adjourned, subject to the call of the President.

*Analyses, Selections, etc.***Ovary Expelled from the Anus.**

Dr. J. C. Tedford, of Moberly, Mo., reports a case, to him unique, in the April number, 1886, of the *St. Louis Courier of Medicine*. Mrs. S., aged about 28, had three children and three miscarriages. She was slender, and not tall. By a mistake of symptoms, in November, 1885, he passed a uterine sound, without resistance, some four inches into the uterus, and on January 9th, 1886, a small fœtus was expelled. Considerable hæmorrhage occurred, but was checked in half an hour, and she rallied well. On January 14th, while seated upon the chamber, she was taken with tenesmus and a disposition to strain, and had severe pains in her abdomen. She could not resist the straining efforts until a tumor was expelled from the anus. Being sent for at once, Dr. Tedford found her lying on her side in bed, and a red, cone-shaped tumor protruding from the anus—not large enough to be a womb, and not bleeding. Digital examination per vaginam showed the womb all right, turned to the side, and a little higher up in the pelvis than natural. Per rectum, the finger showed the tumor had a pedicle, extending upwards to a point almost as far as the index finger could reach; but by firm pressure upwards, he could feel the pedicle pass over a shelf, out of the bowel, through a rent in the rectum. This shelf seemed massive and thicker just under the pedicle than at any other point surrounding it. The tumor was larger at its red protruding end, and faded in color towards its smaller end, and was solid to the touch. Dr. Faulk was called in consultation; and agreeing that it was a protruding ovary, decided that it must be cut away. On touch, it was very painful to the patient. The ovary was cystic. Dr. Dysart, of Paris, Mo., was called in, and at once, with our advice, ligated and cut away the tumor or cystic ovary. A constant discharge of bloody, watery fluid from the rectum followed the operation. The cyst was filled with an almost transparent, whitish substance, tinged a little yellow, and semi-solid in consistency. Quinine and opium were given internally, and antiseptic washes used locally. Afterwards a suppository of iodoform, tannin and morphine was used in the rectum every eight hours. The temperature rose, and the pulse became faster and faster, until she died, on the 20th, from peritonitis and tympanites.

On the 17th, the patient complained of a weight in the rectum, as if something wanted to come away. The finger detached a substance extending down to the sphincter ani, and upward to a point above the pedicle of the amputated ovary. The old pedicle seemed to come out, and was a direct continuation of tissue from just above the pedicle of the former operation. Moderate traction on the tumor drew it out at the anus. A ligature was applied and the tumor punctured, letting water out of the tissues, reducing the size of the mass, so that but a small fraction of tissue was cut off. The pedicle was replaced, and the treatment continued.

Post-Mortem.—On opening the abdomen, no omentum covered the bowels in front, the bowels being in direct contact with the abdominal wall. The omentum was gathered into a wad, or mass, on the left side near the crest of the ilium, and was yellowish white, and greatly softened in texture. The womb and broad ligaments were dark red, and relaxed. The stump from which the left ovary had been cut had slipped out from the ligature into the pelvic cavity. The rectum and lower portion of the colon were firm to the touch, as if filled with something, which something proved to be animal tissue instead of fæces. Intussusception was demonstrated. The ligature upon the pedicle showed the entrance of the ovary into the bowel, and also that that portion of bowel was the lower end of the invaginated portion, which explained the coming down of the second or fluid tumor on the third day after the first operation. The ovary, covered by peritoneum, entered the bowel in the sigmoid flexure, and passed downwards into the rectum, dragging the portion of bowel along the rent, and opening into the bowel below.

Natural Delivery of Arm Presentation.

During a social gathering of physicians, at the home of Dr. Hunter McGuire, in this city, April 7th, the running conversation turning on this subject, Dr. John Herbert Claiborne, of Petersburg, Va., told of some interesting cases which had come under his knowledge. During his earlier experience he was told by a "granny" that she "never minded an arm presentation;" that "it would right itself." He spoke also of an old practitioner whom he called to his assistance, when a young man, in just such a case—asking him to come quickly, and with instruments, to take the child away piece-meal. Dr. Claiborne had tried to return the arm, so as to bring down the feet and deliver, but he could

not get the arm back nor catch hold of the feet, and hence was extremely anxious for hasty assistance. The old doctor, on receiving the message, sent word back to be patient, and that he would be out (some two or three miles) after he got his dinner, etc. In short, he took his time. When he arrived to render assistance, the arm had returned into the cavity of the womb without assistance, and a normal delivery resulted. The old doctor simply said, "Didn't I tell you so?" Some of the other gentlemen present related like observations. We find a case reported in the *Weekly Medical Review*, of April 10th, 1886, that fully corroborates these experiences. Dr. J. W. Long, of Russell, Kansas, says that last May he was called to Mrs. J., aged 24, in labor at eighth month. Labor set in with a "fit" some eight hours before his arrival, at 9 A. M., Thursday, and she had had three other "fits." The os was high up, and flabby, and labor symptoms not decided. At 11 A. M. and 1 P. M., she had other fits. No other spasm, nor sign of labor up to next morning. Labor set in about noon Saturday, during a temporary absence of the Doctor. He was soon at hand, and found an arm presentation, with the body of the child jammed immovably into the pelvic cavity. He chloroformed the patient, and attempted turning; but after an hour's fruitless effort, and being himself exhausted, he gave up in despair—releasing her from the chloroform. She rallied in a few minutes, and awoke in her right mind, when the doctor gave her a full dose of morphia. But the patient took part in the conversation going on in the room, and appeared to be as well as ever she was. In thirty minutes after giving the morphia, he made an examination to see what had become of the arm, when, to his intense surprise and joy, he found the child born. The patient had made no movement to indicate the existence of pain during the thirty minutes, nor was she aware that the child was born until informed of the fact. The lady made a good recovery, and was going about her house in a week or so.

But according to the experiences of such experienced practitioners as Drs. Claiborne, McGuire, Rawley W. Martin, of Chatham, Va., Wm. J. Harris, of Blackstone, Va., and others present on the occasion in this city referred to, too much reliance must not be placed on the advice to let all such cases of arm presentation alone. All will not "come right" in a great number of cases. The cases, however, are worth bearing in mind.

Third Blood Corpuscle, or Corpuscle of Hayem.

The New York correspondent of the *Weekly Medical Review*, April 10th, 1886, says that Dr. William Osler, of the University of Pennsylvania, has recently delivered the fifth course of Cartwright lectures before the College of Physicians and Surgeons on "The Third Corpuscle" of the blood, the so-called "corpuscle of Hayem." He prefers to use the title suggested by Kemp and Martin, and call these new bodies blood plates or blood plaques. They are colorless protoplasmic discs measuring from 1.5 to 3.5 mmm. in diameter. The ratio to red corpuscles is about 1 to 18 or 20. They may be seen as small grayish masses, with, in some cases, projections of fibrin filaments. The masses are due to the "conglutination" of plaques. The latter are best studied by the use of Pacini's fluid or a one per cent. solution of osmic acid, allowing a drop of the latter to mingle on a slide with a drop of blood from a finger-prick. In the blood of a patient suffering from any of the malignant fevers, the plaques may remain isolated and not cohere. They may under some circumstances become crenated. The change is believed to be in its nature physical, and not amœboid. They are more numerous in a diseased organism and specially abundant in the diseases presenting a cachectic appearance—e. g. cancer, and pulmonary phthisis in its stages. Hayem estimated their average number under normal conditions to be from 250,000 to 300,000 per cubic millimeter, and in the blood of diseased persons, and as well that of the newly born, the number may mount up to half a million. It is believed that this blood plaque performs an important function in coagulation. As to its exact relation to this process, our knowledge is purely speculative.

The Tongue in Disease.

White-coated indicates febrile disturbance.

Brown moist indicates disordered digestion or over loaded primæ viæ.

Brown dry indicates depressed vitality as in typhoid conditions and blood poisoning.

Red moist indicates debility, as from exhausting discharges.

Red dry indicates pyrexia, or inflammatory fever.

"Strawberry" with prominent papillæ indicates scarlet fever or rotheln.

Red glazed indicates debility with want of assimilative power of digestion.

Tremulous flabby indicates delirium tremens.

Hesitancy in protruding indicates concussion of brain.

Protrusion at one side indicates paralysis of muscles of that side.

Bluish glazed, with cracks or loss of epithelium, indicates tertiary syphilis.

White patch on tongue indicates psoriasis linguæ.

Thickened epithelium of tongue indicates ichthyosis, which frequently leads to epithelioma.

Chronic ulceration of tongue indicates decayed teeth, tertiary syphilis or epithelioma.—*Med. World*, March, 1886.

Unusual Susceptibility to Morphia.

Dr. Wm. G. Eggleston, of Chicago, Ill., reports a case in the *Journal of the American Association*, April 10th, 1886 (of which he is Assistant Editor), which is interesting on account of the facts that the drug acted in a remarkably short time, and that at times there was no appreciable interval between the anodyne and hypnotic effects. On March 13, at 8 P. M., I was called to see A. F. H., æt. 44, who was suffering from a very severe attack of sciatica on the right side. I administered morphia, gr. $\frac{1}{6}$, with gr. $\frac{1}{200}$ of atropia. While replacing my syringe in the case the patient threw his arms across his chest, said "All right," and was asleep immediately. This was just four minutes after the injection was made. Being somewhat alarmed at such unusual susceptibility, I aroused the patient and spoke to him. I had no difficulty in awakening him, and he seemed surprised that I had aroused him. He said that the drug had had a similar effect two or three years ago when he had taken it, and his wife confirmed his statement. Upon this information I determined to set aside my proposed treatment of the case with injections of ether, and to use morphia, with cod-liver oil and phosphorus internally. March 14, I administered gr. $\frac{1}{6}$ morphia, with gr. $\frac{1}{200}$ of atropia, at 9 A. M. The patient had slept well the night before until about 3:30 A. M., after which the pain began to return slowly. The injections were made superficially behind the right trochanter on the affected side. Within three minutes the patient announced that he "felt it" in his arms—"a kind of numb feeling down through the elbows." Within another minute he said that he was perfectly easy. This time, however, he did not fall asleep. Another injection

was made in the evening, the pain being annoying, but not so great as on the previous afternoon. Within a few seconds less than four minutes he began to say that he felt better, but was asleep before the sentence was completed. In the morning he had commenced taking teaspoonful doses of cod-liver oil and phosphorus (gr. i—f5jss).

Cure of Fissure of the Anus Without Operation.

Dr. Charles B. Kelsey, of New York city, in the *New York Medical Journal*, for April 10th, 1886, details some interesting experiences on this subject. He gives sixteen cases of fissure of anus, not selected, but taken in their order from his case book, every one of which he has cured by very simple means. To quote from his paper:—"In one only have I operated, and in that one simply from lack of time to carry out the treatment I shall describe. In one only has the patient disappeared without a satisfactory cure, and his case was complicated with advanced pulmonary disease, and the result is not known. In some of the cases a cure was obtained at a single visit. This is certainly a very satisfactory showing, and it can be obtained by the following very simple rules;

1. Begin treatment by ordering a laxative every night, so that at least two passages can be secured daily.

2. If defecation is very painful, give an enema in the morning and secure an evacuation before making any application to the fissure.

3. Touch the fissure thoroughly each day with a solution of nitrate of silver, varying from five to fifteen grains to the ounce. Do this gently but thoroughly with a soft camel's-hair brush.

4. If this fails, try the insufflation of calomel, bismuth, or iodoform, in dry powder; and, should these not succeed, lay a piece of very soft and fine lint in the sore and change it daily.

If the treatment is followed with delicacy and skill, I am convinced that it will seldom fail.

ACTS EFFICIENTLY AND KINDLY.—I have used Acid Manganate on two lady patients who had been badly troubled with constipation for a long time, and had been the rounds of cathartics and laxatives, but this acted so efficiently and kindly that I have prescribed more, and now they have no trouble.—B. PORTER, M. D., *Newport, Me.*

Book Notices.

Disorders of Menstruation—A Practical Treatise. By JOHN N. UPSHUR, M. D., Professor of Materia Medica and Therapeutics in Medical College of Virginia. New York and London: G. P. Putnam's Sons. 1886. Flexible Cloth. 12mo. Price 1.25. (For sale by Messrs. West, Johnston & Co., Richmond')

This book has an attractive title, and relates to disorders which are of special interest to all general practitioners. After the chapters devoted respectively to the anatomy of the parts concerned and to the physiology of menstruation, the author takes up seriatim the functional disturbances affecting the quantity and quality of the menstrual discharges, and then passes on to the diseased or disordered conditions of the ovaries. The influences of vesical irritation and of pelvic cellulitis or parametritis upon menstruation are well discussed. A short chapter is given to the neuroses of menstruation which gives information and suggestion. The concluding chapter is on the menopause. In the chapter on menorrhagia and metrorrhagia, he points out an error that Dr. Emmet has fallen into, in saying that the negro "is much less liable than the white woman to cancer of the uterus;" but he accounts for this error by the fact that Dr. Emmet has but little negro practice, whereas Dr. Upshur's opportunities justify him in asserting that he has "repeatedly seen cancer of the womb in the negro." The experience of Southern practitioners, who have much negro practice, we believe, will warrant the assertion of Dr. Upshur that cancer "*is not a rare affection*" in the negress. Our want of space prevents criticism of any of the views of the author wherein he differs with standard authorities, or where he discusses some matters still on disputable ground.

We should add, however, that the publishers have been more than ordinarily careless in the preparation of manuscript for the printer. In many instances, distinct sentences stand forth without a verb; the punctuation is frequently incorrect, and the text is sometimes so obscured from want of a little editorial attention as to keep the idea of the author obscured. An evident slip of the author's pen (page 4) makes him say the normal condition of the uterus is "slight antever-sion," when he intended to say *anteflexion*. Paragraphing is bad, and typographical errors are too frequent. Such familiar names as Mundé and Emmet appear, we believe invariably

throughout the book, as Mundè and Emmett, which is as bad as misspelling Dr. Upshur's name Dr. Upsher. Chapter IX has for its caption "The Neuroses of *the* Menstruation," and the running head of each right hand page of this chapter of 21 pages, consistently with its title, keeps up this error. The publishers have complimented Dr. Upshur's book by placing it in their "Student's Manual" series. Attaching such importance to the work, they themselves will unquestionably see to it that a thorough revision is made in the direction referred to before issuing a second edition. Unless more careful, they will injure the enviable reputation they have justly won as publishers.

Practical Clinical Lessons on Syphilis and the Genito-Urinary Diseases. By FESSENDEN N. OTIS, M. D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York; Surgeon to Charity Hospital, etc. New York: Printed for the Author. 1886. Cloth 8vo. Pp. 584. Price \$2. (For sale by Messrs. West, Johnston & Co., Richmond).

This "student's edition," the Preface tells us, "is published by the author simply because the former edition" is out of print. In short, this is a reprint of the first edition, and is sold at a price that simply covers cost of publication. The author promises an early edition which will be a revision of the first. It will contain some changes in the arrangement of the material and will have some additional important matter relating to hereditary and infantile syphilis, as well as chapters on diseases of the prostate, and stone in the bladder. In view of the favorable and commendatory notice given in this journal of the first edition (of which the present edition is but a reprint), our purpose is accomplished in simply making the announcement we do as to the forthcoming second edition, until which is issued we shall make ourselves content with what we now have from this eminent author and teacher.

Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science, by Various Writers; Illustrated by Chromo-Lithographs and Wood Engravings. Edited by ALBERT H. BUCK, M. D., Vol. II. Imperial 8vo. Pp. 814. Price in Muslin \$6. a volume. William Wood & Company, New York. 1886. (From Publishers.)

This second volume of a work which, when completed, will be almost invaluable to any medical man, treats synoptically of subjects embraced, alphabetically arranged, between

the words "Catarrh, Nasal," and "Eye," inclusive. Some of the sections indeed, constitute almost treatises in themselves. For instance, the section on the "Ear" covers 62 pages of this closely printed double column, extra large octavo book; giving its anatomy, physiology, diseases, etc., as treated of by six different authors in the respective departments. The "Eye," in the same manner receives the attention of 34 pages. "Dislocations" take up 35 pages. And so it is with every important subject that can be reasonably expected to be considered in such a work—each receiving its due share of consideration. It is impossible to give in the limited space at our command a fuller description of the kind of work this is to be. But we may mention some of the notes taken from the advertisement of this *Reference Handbook* for the benefit of readers who intend to provide themselves with the series. The work will be completed in eight volumes of about the size of the present one. Volumes I and II are issued. Each subsequent volume will be issued at intervals of *about* three or four months. Volumes will not be sold separately, nor will they be supplied by the trade at any discount on the publisher's subscription price, namely, Extra English muslin binding, \$6. per volume or \$48. for the set; fine leather, raised bands, \$7. per volume, \$56. for the set; and extra Turkey morocco, English cloth sides, \$8. per volume, or \$64. per completed set. Orders should be sent at once directly to the Publishers in New York, and the volumes as finished will be delivered—express charges or mail postage free.

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

Case of Hereditary Glaucoma. By HERBERT HAREAN, M. D., Baltimore, Md., 8vo. Pp. 3.

Notes of a Series of Cataract Extractions by Von Graefe's Method. By Dr. SAMUEL THEOBALD, Baltimore. (From *Md. Med. Jour.*, Feb. 20th, 1886.) 8vo. Pp. 15.

Practical Hints about Sympathetic Diseases of the Eye. By DR. C. A. BUCKLIN, New York. (From *Med. Record.*) 8vo. Pp. 8.

Third Annual Report of the New York Skin and Cancer Hospital. 8vo. Pp. 24. DR. L. DUNCAN BUKKEY, Secretary.

Reflex Irritation from Hypertrophy of Labia Minora By DR. CHAS. L. GWYN, Galveston, Texas. (From *Trans. Texas Med. Asso.*, 1885.) 8vo. Pp. 7.

VIRGINIA MEDICAL MONTHLY,

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LANDON B. EDWARDS, M. D.....EDITOR AND PROPRIETOR.

Original Contributions solicited from all sections; but the Editor does not hold himself responsible for the views of authors.

Articles contributed to the pages of this Journal must not be duplicated in other journals by the author without proper credit being given to the Virginia Medical Monthly.

Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

Notice of Removal.

Dr. T. Gaillard Thomas has removed from 294 Fifth Avenue, to No. 600 Madison Avenue, between 57th and 58th Streets, New York city.

Virginia State Board of Medical Examiners.

The *Second Annual Session* of the Board was convened in this city, April 7th. Thirty-four applicants for license to practice medicine in Virginia presented themselves for examination. A full report is given on other pages in this issue. No candidate was a graduate of the University of Virginia—the commencement exercises of that institution taking place in June. Its graduates, therefore, for the most part, have to stand their examinations before committees of three, as provided for by the law—outside of the annual sessions of the Board, which are held in April so as to accommodate the majority of medical graduates of the country who receive their diplomas in February and March. But it is to be said of this institution, as of the Medical College of Virginia, with something of State pride, that no applicant for license from either of these State institutions has yet failed to pass a successful examination. No one can charge any degree of unfairness or partiality to the Board in making these examinations, for it is not known by the Examiners from what College applicants receive their diplo-

mas. While no reflection can justly be made upon the real value of many of the Colleges of other States whose graduates fail to stand satisfactorily before the Virginia Board, this much may fairly be inferred—that the system of individual examinations of members of graduating classes is not at all thorough in many of the noted colleges that pride themselves on having eminent professors and very large classes. The system of personally questioning students upon previous lectures and upon text-book lessons adopted by the Virginia Colleges has proven to be eminently successful. A thorough requirement to come up to the standard is strictly carried out when parties apply for graduation. Hence it may be said with credit to the Virginia Colleges that it is seldom indeed that they turn out a graduate that is not qualified to compete with graduates from any other medical school in the country. Hence, too, it is extremely rare for a graduate of either of the Virginia Colleges to fail in his examinations before the Army, Navy, or Marine Hospital Boards.

We have extended these remarks to such a length in order to insist upon the importance in other colleges, where men of even more than national eminence are professors, to do more than they have heretofore done in closely questioning candidates for graduation, or to establish in connection with their colleges thoroughly competent quiz-professors. It is not right that the high degree of eminence which their colleges enjoy because of the renown of their professors and the opportunities they have for every form of proper instruction, should suffer by reason of setting sail upon the professional sea waifs that are not fit to leave the shore. We appeal to them in the spirit of common justice to the profession, from which they are to derive their support, to be more careful in the future as to the merits or ability of their graduates. In the hope of accomplishing good without wounding sensibility, we forbear mentioning at present the names of the very reputable colleges whose graduates, in too large a proportion to justify the excuse of accidental bestowal of diplomas, have failed to pass the plain, practical examinations laid down by the Virginia Board.

As to the examinations given by the Board, we think they bear the criticism of having been generally too long. Some of the best examination papers that were presented kept the gentlemen busily at work from 10 or 11 o'clock Wednesday morning, till late hours at night each day until Friday, and even Saturday. Physical endurance is nearly exhausted by

such prolonged mental strain. It seems to us that fewer questions, or questions that involve shorter answers, would be equally valuable as test questions.

A rumor has become current that during the progress of the examinations, one or more of the applicants degraded himself or themselves by obtaining information clandestinely—that after the questions were given out, the party or parties retired from the Hall and consulted text-books or pocket-manuals, etc. If such a thing becomes known as a fact, the party guilty should be drummed out of the profession for conduct unbecoming a gentleman, in view of his oath that he has neither improperly received nor given information regarding the subjects involved in the examination. It may be idle waste of time now to undertake an investigation in this direction, since we cannot find how and by whom the rumor began; but from our knowledge of the exalted personal sentiments of many of the class who have just been examined, and the high sense of honor which prevails in the Virginia profession generally, if it becomes known that one so debased himself and his honored profession, we predict for him that it would have been better that a mill-stone were hanged about his neck than for him to remain in the profession. This is a serious matter, and the possible recurrence of such an intimation should be carefully guarded against in the future. One outrage of the kind alluded to involves a whole class of honorable gentlemen.

The meeting of the Board was not without its social features. Dr. Hunter McGuire gave an elegant entertainment at his handsome house, on Wednesday night, where every pleasure of a social character was enjoyed until a late hour. On Thursday night Dr. Hugh M. Taylor gave a fine supper at his home, which was likewise marked by sociability and enjoyment.

The next semi-annual session of the Board will be held at Fredericksburg, Va., during the session of the Medical Society of Virginia, in November. In the meantime, information by applicants for examination during the vacation may be obtained by addressing Dr. Wm. C. Dabney, of Charlottesville, Va., President of the Board, or Dr. Hugh T. Nelson, Charlottesville, Va., Secretary.

Mr. T. Roberts Baker,—Correction.

In the notice last month of this estimable house, we erred in stating that Mr. Baker has been Second and First Vice

President of the Virginia Pharmaceutical Association. We should have said "of the *American* Pharmaceutical Association." He was the first President of the Virginia Pharmaceutical Association, of which he is now the Corresponding Secretary. He was elected President of the Virginia State Board of Pharmacy at its organization, under the recently enacted statute, March 25th, 1886.

Some More Typographicals.

We regret to find the following errors in the excellent paper by Dr. Wenzel, in the April No.:—On page 20, 2d line from top, "rich soup" should read, *rice soup*; page 21, 12th line from top, read *same symptoms* for "some symptoms"; same page, 5th line from bottom, for "one-quarter inch" read *one and one-quarter inch*. The next clause of the sentence is entirely omitted, which should read as follows: *right ventricle wall one quarter inch thick*; page 22, 2d line from top, "tricuspid râles," read *tricuspid valves*; same page, 3d line from top, for "pulmonary râles," read *pulmonary valves*; page 23, line 19 from bottom, for "glycerine sediment", read *glycerine-like sediments*; same page, line 17 from bottom, for "without having," read *without leaving*.

The Neurological Review.

The prospectus of *The Neurological Review*, to be edited by J. S. Jewell, M. D., Chicago, Ill., is on our table. Subscription \$2 for the year 1886; \$3 per annum thereafter. Professor Jewell's well known ability, and his successful work for many years as Editor-in-chief of the *Journal of Nervous and Mental Diseases*, guarantees to the reading profession that this special field of medical journalism will be well filled, in accordance with the admirably announced scope of the *Review*. Editorials will be the leading department; and, in this, the support of Dr. H. M. Bannister, the former associate of Professor Jewell, will be had. We look with much pleasure for the initial number, which will make its appearance between the 15th of this and the 1st of next month. After that, the *Review* will be issued between the 1st and 15th days of each month. Success to it and its editors.

Florida Medical Association.

The next annual meeting of the Florida Medical Association, will be held in Palatka, Putnam county, Fla., on the third Tuesday in May (18th,) 1886.

Physicians Wanting Locations—Good News.

We have seen a letter from a leading citizen of Summers county, West Virginia, which says that a good, industrious, sober physician is needed at Green Sulphur Springs, of said county. It is spoken of as a fine opening, and will give a living practice. For further information, address, with stamps for reply, either Dr. Frank M. Bennett, or James H. Miller, Esq., Commonwealth's Attorney of Hinton, West Va.

We have also seen a communication stating that a physician is wanted in Amsterdam, Botetourt Co., Va., to take the place of one who has recently moved to another place. The note speaks of the place as a fine opening for a sober, industrious and competent person.

Superintendency of the Western [Va.] Lunatic Asylum.

Dr. Conrad, of Winchester, Va., has been elected Superintendent of the Western (Va.) Lunatic Asylum, at Staunton, Va., *vice* Dr. A. M. Fauntleroy. Dr. Conrad was for a term Superintendent of the Central Lunatic Asylum, near this city; but was displaced by the military authorities soon after the war.

Obituary Record.

Dr. Robert B. Coleman

Died at his home in this city March 20th, 1886. aged 26 years. He was a son of Dr. Robert T. Coleman, late Professor of Obstetrics in the Medical College of Virginia. Dr. Coleman, Jr., was a man of promise in his profession, and, following in the footsteps of his lamented father, was enjoying a large and influential practice.

Dr. David Steel

Died at his home in Petersburg, Va., March 9th, 1886, aged about 56 years. He was born in Scotland, and received his diploma from a European College. He was an ardent supporter of the Medical Society of Virginia, was a practitioner of ripe experience and enjoyed an excellent practice. He was always anxious to promote the interest of his profession. He left a very large circle of friends to mourn his loss.

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RICHMOND, JUNE, 1886.

Foreign Correspondence.

Paris Chronicles:—Bouchardat's Funeral; Scarlet Fever Epidemic—Mussey's Treatment for Scarlatina and Diphtheria—Contagiousness of Scarlatina Disregarded, but Condemned; Pasteur's Hydrophobia Vaccinations—Not being a Physician, He Has to Employ an Assistant to Comply with Law; Professional Fees, and French Jealousy—Pasteur's Success and Honors Notwithstanding; Ricord's Practice, chiefly as Consultant—Recollections of His Glory—His Personal Appearance—Dr. Wm. E. Johnston's Death; Only Two American Practitioners remain in Paris, etc.

PARIS, FRANCE, April 23d, 1886.

Mr. Editor,—Although *Professor Bouchardat* left as a dying request that he should be buried without parade, his funeral was one of the largest ever witnessed in Paris. The members of the Academy of Medicine attended in a body, but without their official robes; every scientific association of the metropolis sent its representatives, and a large concourse of sorrowing friends followed his remains to *Pere La Chasse*. His *Annuaire de Therapeutique* was published for forty-five consecutive years, and his *Nouveau Formulaire Magistral* passed through nineteen editions. He was the first professor who gained his chair by *Concours*, having defeated *Beclard*, *Tardieu*, *Janson* and *Marichal de Calvi* in

1876. No man in France was more respected for moral worth and scientific attainment, and his death has caused a profound and general sorrow.

Scarlet Fever is prevailing as an epidemic in Paris at this moment. Adults as well as children have fallen victims to it, and the ratio of mortality is exceptionally high. As a general rule, it is a far less serious disease in this country than in England and America, the dreaded *sequelæ* but seldom manifesting themselves. The favorite mode of treatment in severe cases—those in which the temperature reaches 104° —is the cold bath, while local applications to the fauces are generally discarded. Dr. Gueneau de Mussey—who was an unusually able practitioner—was in the habit of using the following mixture, both in the form of spray and as a gargle:

Ry. Potass. chloratis..... \mathfrak{z} ij:
 Acidi carbolicæ.....gr.ij.
 Glycerinæ puræ.....f. \mathfrak{z} ij.
 Liq. calcisq. s. ad \mathfrak{z} ij.
 M. S. For local application.

In diphtheria also—especially when the false membrane was friable—he invariably recommended it, though he never touched the throat either with brush or mop, as so many practitioners are in the habit of doing. I have found *boracic acid lozenges* an advisable local remedy; and *pastiles of the borate of soda* are much in vogue here.

So little apprehension is felt as to the *contagious nature* of scarlet fever, that in the *Hopital des Enfants*, patients affected with it are treated in the public wards, no effort at their segregation being attempted. In my judgment, this is a relic of barbarism—an infatuation unworthy of the century, for I have known the contagion of this disease to be carried twelve miles by a physician, who drove the whole distance in an open vehicle.

The *vaccinations of Pasteur* are the wonder of the hour. One singular fact I must mention in this connection. Not being a physician, he cannot employ his own remedy without violating the law, and becoming amenable to fine and imprisonment. On inferior animals, he is at liberty to ex-

periment *ad libitum*; but for the *genus homo* he finds himself compelled to employ a medical assistant, so as to escape the penalties presented for the illegal practice of medicine. In France no one can write a prescription or perform the simplest surgical operation unless he is the possessor of a French Diploma or a Ministerial Authorization, that is, a stamped paper signed by the Minister of Public Instruction, recognizing him as a physician; and Pasteur himself could not obtain the latter, to such an extent has the Faculty carried its antagonism to the the issuing of such permits. This opposition is envy—in the jealousy of the native doctors towards the foreign physicians who have settled in Paris and monopolized the practice of their own compatriots, which pays infinitely better than that of the French.

A Frenchman has to climb very high on the professional ladder before he can venture to charge one of his own people more than ten francs (two dollars) per visit, while every foreign physician engaged in practice has invariably charged his fellow-countrymen double that sum for the same service. For an *accouchement*, the ordinary recompense of a native physician is francs 125 (twenty-five dollars), and of a foreigner francs 1,000 (two hundred dollars). Besides, strangers usually pay cash for medical services, whereas residents expect a credit of from six to twelve months, and usually grumble over their bills at that. Hence, the jealousy to which I have referred as the *fons et origo* of the present crusade against Ministerial Authorization upon the part of French physicians. If their alien *confreres* were out of the way this rich harvest would necessarily fall into French hands, and, with the design of securing it inevitably, the Faculty has adopted the plan of preventing the farther licensing of foreigners in France, and of permitting nature to clear the field of those who already occupy it by the intervention of that certain agent, the hand of death. Having thus closed and barred the door to their rivals, they cannot consistently open it to their friends; and even Pasteur—with laurels gathered from every quarter of the globe, and towering as much before them as some majestic poplar above the stunted brambles at its roots—must remain out in

the cold to satisfy the demands of their avarice and illiberality.

However plausible the arguments of the *anti-microbe* School, and whatever the alleged defects of his premises, there is no denying the fact of the practical success of his system. With more than *five hundred* vaccinations, and only *four deaths* among those who have invoked his aid, after having been bitten by rabid animals, he can afford to defy his enemies, and to appeal to the world for his vindication. Facts are stubborn things—the more so in proportion to the importance of the matter to which they relate, and to the fidelity with which they have been recorded—and it is just as impossible to refute a system supported by such an array of facts, and with such guarantees of their reliability, as it is to overturn the Pyramids by a process of ratiocination, or to restrain Niagara with a syllogism. Truth is incontestable—where it begins controversy terminates; and hence it is that objections to the theory upon which this plea of provocation is based, as well as all argument in contravention of the system itself, are *ipso facto* irrelevant, irrational and inadmissible, if the well authenticated cures which have been effected, if the hundreds of living proof of the success of Pasteur's treatment—criticism is disarmed, and faith in him and his teachings becomes a logical necessity.

Doctor Ricord is still engaged in the active practice of his profession in despite of his advanced age and his many physical infirmities. In a recent consultation he remarked, "my legs bother, and my strength is failing me, but, thank God, my mind is as clear as ever." And so I found it when he entered the sick-chamber, for he charmed the patient by his ready wit and wonderful vivacity, while he delighted me by his critical examination of the case, his accurate diagnosis and the pertinancy of the remedies which he suggested. Of late years, he has not devoted himself so much to his specialty—as to the role of a consultant, in which, by the way, he is admirable. One reason for this is that he is not so generally sought after by those suffering *specifically*—the theories with which he once startled the world having

mostly been swept into oblivion by the tide of advancing science, and his prestige as a specialist having in a great measure departed.

Some thirty years ago I met Ricord at a ball which had been given by the Americans then residing in Paris to celebrate some national anniversary. He was then in the prime of life, and at the apex of his fame, being the surgeon of *Le Medi*, the physician of the Emperor, the pet of Paris, and the leading man of the age. A finer specimen of manhood I had never seen. His figure was commanding, his carriage stately, his countenance open and handsome, and in every respect he bore the aspect of one upon whom genius had set its stamp, and fortune had lavished her treasures. If ever hero-worship had its fruition, it was on that occasion, for his reception was such an ovation as royalty itself might have rejoiced over.

Recently I met him at the dinner given by the Stanley Club to Pasteur, but only to be impressed most sensibly of the change which time had wrought alike in the man and in his surroundings. His form had become bent and attenuated; his gait had grown slow and tottering; his face was drawn and wrinkled; and his whole appearance was indicative of physical decay. Of those who had delighted to honor him in other days scarcely one remained, and their places were filled by a new generation—by younger men to whom the name and fame of Ricord were either unknown or were matters only of tradition.

His coming excited no comment—elicited no applause—was scarcely remarked by the excited throng, which, with bated breath and feverish expectancy, awaited the arrival of the new idol to whom the world had accorded its homage. It was apparent that his star had waned, and that another had appeared of incomparable refulgence—of unprecedented grandeur; and, while I was unable to repress a sigh of regret at the changed fortunes of Ricord, I could but rejoice over the ovation accorded to Pasteur, and indulge the hope that in another thirty years he too would be forgotten in the adulation lavished upon some other disciple of science, who had still further enlarged the boundaries of human knowledge and secured even greater blessings to his kind.

Dr. William E. Johnston, an American physician, who had practiced in Paris for many years, died recently of cancer of the stomach. He was originally the Special Correspondent of the *New York Times*, and during the Crimean war wrote letters over the signature of *Matakoff*, which attracted much attention. His death reduces the number of American practitioners in Paris to two, although I found *eight* on my arrival in 1875. Of that number *four* have died, *three* have removed to other localities, and *one* only remains—making with myself the sole remaining representatives of our country among the foreign physicians of this city.

If the future is to be judged by the past, it is evident from the record that our French *confrères* will not have to wait indefinitely for that portion of the professional field from which they have heretofore been debarred by Americans.

“The glories of our blood and State,
Are shadows—not substantial factors;
There is no armour against fate,
For death spares neither kings nor doctors.”

EDWARD WARREN-BEY.

TREATMENT OF TETANUS.—The following is a summary of the treatment advocated by Professor Verneuil for this disease (*Revue Médicale*, Feb. 28, 1885): 1, Complete immobilization of the patient, obtained by fastening him firmly in a large gutter splint for the body and limbs; 2, the maintenance of an elevated and constant temperature, with light diaphoresis, by enveloping the patient in a thick covering of cotton-wool; 3, uninterrupted sleep, obtained by chloral intoxication, maintained for upward of three weeks.

THE ACTIVE PRINCIPLES OF CANNABIS INDICA.—Various active principles have been obtained from cannabis indica, but none as yet which represent the entire virtues of the plant. A druggist, Bombelon, has separated three different substances: cannabin purum, cannabinon, and haschisch. Cannabinon is the only one which has given good results. Dr. Richter found in fourteen cases that it was a tolerably good hypnotic.

Proceedings of Societies, Boards, etc.

AMERICAN MEDICAL ASSOCIATION.*

GENERAL SESSION.

FIRST DAY—TUESDAY, MAY 4TH, 1886.

The Thirty-seventh Annual Session convened in the Music Hall of the Exposition Building, in St. Louis, Mo., at 11:30 A. M. It was called to order by Dr. LeGrand Atwood, Chairman of the Local Committee of Arrangements, who introduced the President of the Association, Dr. William Brodie, of Detroit, Mich. Rev. Dr. Montgomery Schuyler, of Christ (Episcopal) Church, read a prayer. The Secretary, Dr. Wm. B. Atkinson, of Philadelphia, Pa., and the Treasurer, Dr. Richard J. Dunglison, also of Philadelphia, were at their desks on the beautifully decorated stage. Vice-Presidents, Dr. Samuel A. Logan, of New Orleans, La., and Dr. A. Y. P. Garnett, of Washington, D. C., besides some of the ex-Presidents—Drs. N. S. Davis, of Chicago, Ill., Joseph M. Toner, of Washington, D. C., T. G. Richardson, of New Orleans, La., Henry F. Campbell, Augusta, Ga., D. W. Yandell, of Louisville, Ky.—were also seated upon the stage during the Session.

Hon. D. R. Francis, Mayor of St. Louis, delivered

THE ADDRESS OF WELCOME.

He claimed that St. Louis is the healthiest city in America, and hence welcomes those who seek health. He said that the history of medicine is the history of science, religion, society, progress. No brighter intellects have adorned history than those which grace the rolls of your profession. Many of the discoveries of your predecessors have proved of untold value. Chiron, with his pupil Æsculapius; Hippocrates, the father of rational medicine; Praxagoras, the discoverer of the relations between the pulse and the general condition of the system; the great Galen, whose doctrines were implicitly accepted for twelve centuries, and until Vesalius, the anatomist, joined issue with them; Harvey, the discoverer of the circulation of the blood; Haller, the physiologist; Jenner, with his discovery of vaccine virus, are a

*This report is compiled from our special Correspondences, and from reports given in the *Globe-Democrat*, *Daily Republican*, *Post-Dispatch*, *Daily Bulletin*, *Weekly Medical Review*, *Medical News*, *Medical Record*, *New York Medical Journal*.

few of the immortal names which have honored your profession, and which you delight to honor. The Mayor's welcome was cordial, and impressed his hearers with a sense of earnestness that is not always felt on such occasions.

Dr. LeGrand Atwood, for the profession of St. Louis, *also welcomed* the Association. He remarked that thirty-three years ago, Dr. Wm. Brodie became a member of the Association, then in session in St. Louis; to-day he returns as its President. This is the home where were witnessed the life labors of men distinguished in the history of medicine. Here resided Beaumont, whose researches in physiology are considered standard authority; Joseph Nash McDowell, nephew of the great Ephraim McDowell, was the founder of the first medical college west of the Mississippi river; Dr. John S. Moore, who first lectured to a medical class on this side of the "mother of waters," had his home in this city; Dr. Chas. A. Pope also resided here, who was in his time the first surgeon and the gentleman of the Mississippi Valley. Last, but not least, in this city lived, labored and died the immortal John T. Hodgen. In behalf of the local profession of St. Louis, I extend to you a thousand welcomes to our hearts and homes.

PROTEST AGAINST RECEIVING DELEGATES

from the Philadelphia County Medical Society, New York Academy of Medicine, Davidson County (Tenn.) Medical Society, were read.

Dr. J. Roberts, of Nashville, Tenn., excitedly protested against the reception of delegates from the Tennessee Medical Society, from whom it appeared the protest against the Davidson County delegates came. The protests were referred to the Judicial Council.

MEMBERS BY INVITATION.

Drs. Wm. N. Morrison and H. J. McKillops, of St. Louis, Wm. H. Atkinson, of New York, and O. Manfred Johnson, of Harvard, Ill., were presented as members by invitation.

Dr. L. H. Keller, of Hot Springs, Ark., objected to the admission of these gentlemen, saying he thought it was the intention of the Constitution that only distinguished foreigners should become members by invitation.

President Brodie disagreed with him, and upon the admission being put to vote, the invited members were declared admitted.

President Brodie then delivered

The President's Address.

He said he thought we ought to be thankful that so many have been spared to meet together to sustain the vitality of the Association. But some of our members are missing. Three of the brightest lights have departed, Drs. Bowling, Atlee, and Flint.

Dr. W. K. Bowling became a member of the Association in 1853, a Vice President in 1856, and President in 1884. In 1851 he took charge of the *Nashville Journal of Medicine*, and continued with this publication for sixteen years. He took active interest in the education of the young, and in 1853 assisted in laying the corner-stone of the first school in Nashville, Tenn. In 1873 he was elected President of the Association of American Medical Editors. His contributions to medical literature were widely read and quoted. He was appointed State member of the International Medical Congress in 1876. He was a man of genius, and his devotion to his profession was remarkable. He died as he lived—a noble, generous-hearted man, loving his fellow-man.

Dr. John E. Atlee commenced the study of medicine in 1821. He became a member of the Association in 1848, and was elected President in 1882. The code of ethics was looked upon by him as a message from the Most High. In his sixty-five years of practice he performed 2,521 surgical operations, and treated an enormous number of cases of parturition. He had the confidence of his people at home, and the respect of the profession elsewhere.

Dr. Austin Flint died March 13, 1886. He was one of the founders of the Association, being a delegate from Erie county, New York, to the State Medical Convention, held in New York city in 1846, at which time the organization of a national association was first broached. He gave many valuable papers on practice of medicine, on *materia medica*, pathology, diabetes, etc. His addresses before the International Medical Congress, and his address as President in 1884, were especially able. He was an indefatigable worker. His recognition of the code of ethics elevated himself to the position of a gentleman. His literary works were the expressions of his experience and observation.

The past generation of our medical men is fast passing away. May we hope that those who follow will fittingly represent their predecessors.

Progress of the Association.—When the first meeting was held, in 1846, at New York, it was resolved that it would be

greatly beneficial for medical practitioners to organize a national association. There were 120 at that meeting. A committee was appointed to agree upon a plan of organization, to be reported at a meeting to be held in Philadelphia. A committee was appointed to report upon a standard of requirements for men entering the profession. It was deemed essential that the entire profession of the United States should be bound by the same code of ethics, and a committee was appointed to prepare such a code. Another committee was appointed to report upon the preparation of a nomenclature of diseases adapted to the United States. But four of these pioneers are now living—Drs. N S Davis, Alfred Stillé, Alonzo Clark, and Bush.

At the second meeting, in Philadelphia, in 1847, under the Presidency of Dr. Nathaniel Chapman, twenty-two States and the District of Columbia were represented, the delegates numbering 147, which was a large and representative attendance, when the difficulties of travelling in those days is taken into consideration. The reports of the committees were adopted, and the American Medical Association was accordingly organized.

The Code of Ethics is framed on a basis of religion and morality. The high character of that code has stood the test of nearly forty years. The eclectic and homœopathic schools have copied its principles. The United States are governed by the same spirit shown in this code. But one medical society has ever opposed its principles, and that one is the Medical Society of New York, the body in which the national Association had its inception; and this opposition is objected to by the majority of physicians of that State. Through this code the Association represents the entire medical profession, as Congress represents the people of the United States. It makes the difference between the practice of medicine in this country and in Europe. There a practice can be bought and sold; here it cannot be transferred. Of the original framers of the code, Dr. Alonzo Clark, of New York, now eighty years of age, is living.

Some of the *greatest essays* that have been given to the profession were first presented to this organization. Dr. Dalton's essays gave him a national reputation as a physiologist; Dr. Flint's papers are a standard authority on pulmonic diseases; Prof. Charles R. Meigs laid the foundation of clinicology; Walter J. Barnett, F. H. Hamilton, Henry Frazier Campbell, W. M. Sutton, N. S. Davis, H. R. Storer and a score of others have contributed to the general knowledge.

The Character of the Work done by the Association, besides the work done in papers, magazines, etc., has been of great benefit. Before the organization, specialists were almost unknown; almost all the original members were general practitioners. But when the Association divided into sections for the discussion of special classes of diseases, members began to realize that, by devoting themselves to one branch, instead of working up a general practice, they could often do more good, earn more money, and have less arduous work.

A series of resolutions on the *metric system* were adopted in Atlanta. It has been of little use, and it is recommended that it be taken out of the list of ordinances.

It is suggested that sections for Dermatology and Syphilis be created; and that the position of secretary of sections be made permanent, subject to removal upon the recommendation of the chairman of his section.

The Journal of the Association has thus far been very successful, and the trustees give a very satisfactory statement of its finances. Members are reminded that all papers presented to the Association are the exclusive property of the Association, and will be published in the *Journal*, and are not to be given to any other periodical.

The great increase in the number of proprietary medicines should be checked. There is no essential difference between a *proprietary* and a *patent medicine*. The former publishes a formula, it is true, but you cannot legally use it. The stigma of the profession should rest on those physicians who publicly indorse either patent or proprietary medicines.

It has been suggested that this Association be re-organized on a basis similar to the British Medical Association. Our present organization is equally as good as the British; but I suggest that the idea of forming branches of this Association in different States be referred to a committee.

The action of the committee to arrange for the Ninth International Congress at Washington next year will be reported, and should be adopted. We should bid our foreign friends welcome. He gave a resumé of the work done since the last meeting of the Congress.

Matters of great importance will come before you at this meeting; even the very existence of this body may depend upon your action. Attend to all matters carefully, that it may continue to stand as the representative of the medical profession.

"In returning to the ranks I will exhibit the same zeal in

the cause as I do now, and the same as when I first became a member in this city thirty-three years ago."

On motion by Dr. J. H. Murphy, of St. Paul, Minn., thanks were voted Dr. Brodie, and the suggestions in his address were referred to a Committee.

Dr. LeG. Atwood, by request, presented a *Memorial from the Woman's Christian Temperance Union of Wisconsin*, which was referred to the Section on State Medicine.

INTERNATIONAL MEDICAL CONGRESS.

Dr. J. S. Lynch, of Baltimore, Md., presented the report of the committee to settle the preliminaries for the Ninth International Congress in Washington. The report simply stated that, after mature deliberation, the committee had drafted rules, appointed a Local Committee of Arrangements at Washington, and taken other necessary steps for the nomination of general officers—the whole to form a General Executive Committee.* On motion by Dr. A. L. Gihon, U. S. Navy, the report was received and adopted.

SECTIONS TO NOMINATE THEIR OWN OFFICERS.

Dr. N. S. Davis proposed an amendment to paragraph 3, section 2, of the By-Laws (providing for the nomination of

* It is understood that the following *Officers of the International Medical Congress for 1887* have been elected:

President.—N. S. Davis, of Chicago, Ill.

Vice-Presidents.—W. O. Baldwin, of Montgomery, Ala.; Wm. Brodie, of Detroit, Mich.; W. W. Dawson, of Cincinnati; E. M. Moore, of Rochester, N. Y.; T. G. Richardson, of New Orleans; L. A. Sayre, of New York; J. M. Toner, of Washington; The President of the American Medical Association, the Surgeon-General United States Army, Surgeon-General United States Navy, Supervising-General Marine-Hospital Service.

Secretary-General.—J. B. Hamilton, U. S. Marine-Hospital Service.

Treasurer.—E. S. F. Arnold, of New York.

Chairman Finance Committee.—Frederick S. Dennis, of New York.

Chairmen of Sections:

Medicine.—A. B. Arnold, of Baltimore.

Surgery.—William T. Briggs, of Nashville.

Military and Naval Surgery.—H. M. Smith, of Philadelphia.

Obstetrics.—Delaskie Miller, of Chicago.

Gynecology.—James F. Harrison, of University of Virginia.

Anatomy.—William H. Pancoast, of Philadelphia.

Physiology.—J. H. Callender, of Nashville.

Pathology.—A. B. Palmer, of Ann Arbor.

Diseases of Children.—J. Lewis Smith, of New York.

Ophthalmology.—E. Williams, of Cincinnati.

Otology.—S. J. Jones, of Chicago.

Laryngology.—W. H. Daly, of Pittsburg.

Dermatology and Syphilis.—A. R. Robinson, of New York.

Hygiene.—Joseph Jones, of New Orleans.

Collective Investigation, etc.—H. O. Marcy, of Boston.

Nervous Diseases.—John P. Gray, of Utica.

Dental and Oral Surgery.—J. Taft, of Cincinnati.

the Chairmen and Secretaries of the Sections by the Nominating Committee, consisting of one member from each State). Dr. Davis' proposition was to transfer the duty from this Committee to the several Sections themselves. He did so, because the Nominating Committee was not sufficiently acquainted with members, and frequently nominated those who were the least inclined for work.

A motion to lay the amendment on the table having been negatived,

Dr. R. A. Kinloch, Charleston, S. C., protested against the attempt to make specialists of them all. It was very well for the Northeastern States, but there were many who did not want to be tied down to any particular Section, as they would be by the proposal. The Association was already leaning too much towards specialties.

Dr. E. Smith, of Detroit, Mich., opposed the amendment on the ground that it would allow aspirants to chairmanships an opportunity of packing meetings with their supporters.

Dr. Dudley S. Reynolds, of Louisville, Ky., opposed the amendment.

Dr. Statson, of Minnesota, said the Sections would only nominate, and not elect, so that there would be no use in packing.

Dr. J. H. Murphy, of St Paul, Minn., said the proposal was all very well for the Eastern States, but in the West men could not always be specialists. The existing rule worked well, and he should oppose any amendment. They did not want any lobbying. The scientific work was done in the Sections. If the resolution passes, Sections will be turned into political wire-pulling meetings.

Dr. Murdock, of Pennsylvania, also opposed. It was important that the Association should not be turned into a political organization. They had to discuss medicine and sciences without wire-pulling.

On the amendment being put, the President held that the yeas had it. Division being called for, the amendment was then carried by over four-fifths vote.

Adjourned until to-morrow, 10 A. M.

SECOND DAY—WEDNESDAY, MAY 5TH.

The President (Dr. Brodie) in the Chair. No prayer—due to absence of the minister.

The *Committee on the President's Address* was announced as follows: Drs. J. H. Murphy, St. Paul, Minn., A. Garcelon, Lewiston, Me., and A. L. Gihon, U. S. Navy.

Dr. A. L. Gihon, Chairman, announced that the
Rush Monument Committee

Has been instituted by the appointment of one member from each of the States, Territories and national services represented, and the standing committees thus organized will forthwith proceed upon the collection of funds for the erection of a statue to Dr. Benjamin Rush in the city of Washington by the members of the profession of medicine in the United States. Your Committee, in its report at New Orleans, enumerated the monuments which have been erected at the national capital in commemoration of the famous men in the different callings of life, who have died since the nation was born, and it seems extremely fitting that the medical profession should now build a monument in memory of Dr. Rush. The subscription for this has been limited by the Association to \$1 for each member.

THE NOMINATING COMMITTEE

was then announced by the Secretary: Arkansas, W. O. Hooper; Colorado, J. W. Graham; District of Columbia, J. W. Bulkley; Florida, T. O. Summers; Georgia, J. W. Bailey; Illinois, J. E. Owens; Indiana, T. B. Harvey; Iowa, W. Watson; Kansas, C. V. Notham; Kentucky, W. H. Wathen; Louisiana, Joseph Jones; Maine, C. E. Webster; Massachusetts, E. W. Cushing; Maryland, G. H. Rohé; Michigan, H. O. Walker; Mississippi, P. W. Rawland; Missouri, G. W. Dudley; Minnesota, H. H. Kuntrall; Nebraska, W. M. Knapp; New Mexico, W. R. Tipton; North Carolina, C. J. O'Hagan; New Jersey, E. L. B. Godfrey; New York, E. S. F. Arnold; Ohio, H. S. Sharp; Pennsylvania, J. C. Lange; Rhode Island, H. R. Storer; Texas, J. F. Y. Payne; Vermont, A. T. Woodward; Virginia, Geo. B. McCorkle; West Virginia, G. W. Baird; Wisconsin, W. T. Galloway; United States Navy, W. T. Hoard; United States Marine Hospital, Walter Wyman.

Dr. Savage, of Jackson, Tenn., entered a written protest against the nomination of Dr. Duncan Eve, on the ground that he was a member of a delegation under contest. The protest and the report were referred to the Committee.

Address in Surgery and Anatomy.

Dr. Nicholas Senn, of Milwaukee, Wis., Chairman of the Section, began by remarking that the frequency with which grave complications followed even the most trivial operations before the introduction of modern treatment of wounds,

undoubtedly induced the great Hunter to remark, "The necessity for operation is in truth the defect of surgery." To-day, with an improved technique and the means at our disposal, which, if properly applied, will furnish almost absolute protection against wound infective diseases, the surgeon can, with a just source of pride and gratification, confirm the correctness of the assertion, made centuries ago by Celsus—"Quæ manu potissimum curat."

During the last two decades, the legitimate sphere of the physician has been growing smaller; or, in other words, the practice of medicine has become more and more surgical. Surgery has gained the supremacy over medicine, because the principles upon which modern surgery rests have been made the subject of accurate investigation and positive demonstration in chemical, physiological and pathological laboratories.

During the last few years, surgery has assumed a decidedly progressive character. Operations, a few years ago, deemed impossible or unjustifiable, have become established, legitimate, surgical procedures. In obscure cases the scalpel is now frequently resorted to without fear of additional complications. Modern surgery has its greatest triumphs in the field of the direct local treatment of diseases. The remotest organs are now approached with comparative immunity, and incalculable benefit has been derived from direct operative treatment. The affections of abdominal organs have received well-merited attention since the improved wound treatment has been introduced. Experimental research and clinical experience have demonstrated that organs and parts of organs which were heretofore regarded as essential can be successfully extirpated when injured or diseased.

THE PRESENT STATUS OF ABDOMINAL SURGERY.

It will be my special aim to point out the limitation of *of abdominal operations*, and to draw a distinct line between the feasibility and justifiability of such operations.

Penetrating wounds of the abdomen.—During the last year this subject has been enriched by two valuable papers by Dr. Dennis and Dr. Bryant, of New York. It is a source of national pride that laparotomy in penetrating wounds and visceral injuries of the abdomen was conceived, developed and perfected in America. The propriety of resorting to abdominal section in every case of penetrating wound of the abdomen is urged by many, but is not sanctioned by the

majority of the profession. The great difficulty, in the absence of positive symptoms, is to differentiate between a penetrating and a visceral wound.

Clinical experience and statistics have demonstrated the importance of making a *distinction between punctured wounds and gunshot wounds* of the abdomen in reference to diagnosis and treatment. *Penetrating stab wounds* are less liable to be complicated by visceral injuries than bullet wounds; consequently this class of wounds affords a more favorable prognosis, and does not call so uniformly for abdominal section. As to stab wounds, there is more tendency to prolapse of the intestine. Exploratory laparotomy for diagnostic purposes is also less frequently called for. The numberless recoveries after stab wounds without resorting to heroic treatment must induce every thoughtful surgeon to abstain from the additional risk of laparotomy, unless visceral injury can be assumed with a reasonable degree of certainty. In arriving at conclusions concerning the nature of the injury, the symptoms do not always correspond to the gravity of the visceral lesion; hence, if any doubt remains, it is proper, now that exploratory laparotomy can be made with comparative immunity, to resort to it, and give the only chance of recovery by ascertaining the exact nature of injury, which can be the only safe guide to rational surgical treatment. Dr. Dennis has called special attention to volvulus as another complication of stab wounds of the abdomen, which, when present, would in itself always indicate abdominal section for its relief. In doubtful cases, exploratory laparotomy can be done by enlarging the wound, which, when required, can be followed by the usual incision in the median line when operative treatment of the visceral lesion is required.

In *gunshot wounds of the abdomen*, the treatment is more definitely settled by knowledge, resulting from experimental research, and immense clinical material. These injuries are so uniformly fatal, that the suspicion of injury of the intestines calls for laparotomy as the only chance of recovery. The statement that gunshot injuries of the small intestines are always fatal, if treated upon conservative principles, is well established, and is a sufficient argument in favor of treatment by abdominal section.

In *penetrating gunshot wounds*, it is highly probable that visceral injury exists, and this fact constitutes a potent argument of surgical interference, which alone is adequate to prevent an inevitable fatal termination. The brilliant re-

sults obtained by Bull, Hamilton, and others, in desperate cases of multiple perforations of intestines by operative treatment afford encouragement for imitation of their practice. The surgeon who allows a patient to die from the effect of a visceral injury of the abdomen, produced by a stab or a bullet wound, without at least a proposition to resort to abdominal section, has failed to discharge the duties imposed by modern surgery. Difficulties may be encountered by the medico-legal bearing of a case, but when called to treat an otherwise fatal injury, this should not deter the surgeon from resorting to the only measure which can save life.

The first indication in the treatment of an open wound of the peritoneal cavity is to prevent infection by covering the wound with an antiseptic compress until ample preparations can be made for more effective treatment. The necessary dressing or operation should be done with the least possible delay, and at, or as near as possible, the place where the injury was inflicted. Procrastination and transportation are dangerous, as both augment the gravity of the case by increasing the danger arising from the two most dangerous conditions—hæmorrhage and fæcal extravasation.

The preparation for an abdominal section should be made with the same care as in operating in the abdomen for the removal of an ovarian tumor.

We can never rely upon an aseptic atmosphere; hence the minutest details of antiseptic surgery must be followed. The wound, and especially the prolapsed viscera, must be kept protected as much as possible against the air by avoiding unnecessary exposure. As a disinfectant solution, corrosive sublimate should be preferred to carbolic acid. The temperature of the room should be kept at 80° to 90°F. Until the abdominal cavity is opened, the field of operation should be frequently irrigated. The intestines, when brought out of the wound, should be protected with a warm antiseptic compress, kept moist with a weak solution of corrosive sublimate, to prevent abstraction of heat, and guard against infection.

The abdominal section has for its object: 1, positive diagnosis; 2, arrest of hæmorrhage; 3, restoration of a breach of continuity; and 4, removal of extravasation. Exploration of a penetrating wound, either with the finger or a probe, is never justifiable, as it increases the danger from extravasation and hæmorrhage without furnishing information of diagnostic value. The direction of the wound canal and the anatomical location of the different viscera must be carefully

considered before resorting to operative measures. Search for additional injury when one perforation is found, as a failure to detect all the openings in the intestines would frustrate the object of a great procedure. When necessary to make an exploratory incision large enough to introduce the hand, incise the median line so as to lessen traumatism and hæmorrhage. If many bleeding points are encountered, apply a number of hæmostatic forceps before tying the abdominal blood-vessels. If a large venous trunk is injured, use peripheral compression to help to secure the bleeding vessel. If enterectomy becomes necessary, the two ends of the bowel should always be united with a Gerny-Lembert's suture, as this secures accurate approximation of an extensiveserous surface, and thus furnishes the most favorable condition for rapid union. If fæcal extravasation occurs, use large flat sponges wrung out of a weak solution of corrosive sublimate.

In reviewing other causes in which a resort to abdominal section was justifiable, and should be resorted to, he said: A severe *contusion of the abdomen* may be received, and the physician be inclined to believe that nothing severe will result. It is, however, safer to resort, in cases of doubt, to abdominal section to ascertain the extent of the injury to the alimentary canal. The probable extent of the injury can best be determined by the point where the pressure came. A rupture of the intestines must be expected in case the pressure was directed toward the back walls of the abdominal cavity, and in that case the abdominal section and suturing of the injured part would be counseled by many physicians.

Intestinal Obstruction, again, might be treated in the same way, and sometimes is, though abdominal section is in its infancy. Irrigation of the stomach may remove the obstruction in the canal, and sometimes injection, if applied slowly and steadily, may remove the obstruction.

He then reviewed a number of cases in which abdominal section had been the means of saving life, and remarked that nearly all advocated not interfering with too much of the canal, for fear of a gangrene, as when the blood-supply is cut off from any part of the alimentary canal, that part becomes gangrenous. The vascular supply should be restored to as great a part as possible in all cases, whatever the difficulty which led to the section may be. The treatment of peritonitis (that disease is only a secondary manifestation of a secondary cause) may be by abdominal section. The diag-

nosis of a case of that character shows that vomiting is caused if the stomach is affected, while if the aliment is below the stomach, vomiting does not result.

Address in Obstetrics and Diseases of Women.

Dr. S. C. Gordon, Portland, Me., Chairman of the Section, remarked that the year just passed had not rendered any discoveries in obstetrics or gynæcology. He advised practitioners to abstain from practice after attending cases of puerperal fever, and the rule should be strictly enforced. In a general way he averred that the sloppy diet of the lying-in room had been a fruitful source of many troubles of the child-bed. He recommended a nutritious diet, believing in a liberal construction of the rule that nature did not make mistakes often. With a word in favor of antiseptics and forceps, when necessary, he proceeded to the branch of gynæcology and the new features of this specialty which had passed under his notice. The concluding portion of the paper dealt with hysteria and its relation to diseases of the uterine appendages. The diseases included under the general name of hysteria were numberless. Proteus never took more shapes than hysteria, nor the chameleon more varied hues. This disease was confined almost exclusively to women. Out of the cases observed by Dr. Hammond in one year, 329 were females. That hysteria was so seldom found in the male, and when found being of so mild a type, must be due to disease in some organ in the female not possessed by the male. He recommended removal of the ovarian appendages for the cure of stubborn cases of this disease, stating that the objections to this operation were unfounded, for in all cases of hysteria he found cystic degeneration of the ovary, the organ being unable to perform its proper function, and was therefore useless. He mentioned several cases which he had treated in this manner with perfect success, although the disease had been of long standing, and the patients were very near death's door.

SECTION ON MEDICAL JURISPRUDENCE ESTABLISHED.

Dr. Quimby, Chairman of the Committee appointed last year, reported in favor of the adoption of a new Section on Medical Jurisprudence. Members of the profession were unacquainted with their legal relation to insanity and crime, and of their relation to their patients in a testamentary capacity.

Dr. Logan regarded the creation of the new department

as an unnecessary addition. They had a Section on State Medicine and Hygiene, which should consider the subject of medical jurisprudence.

Dr. Campbell supported the recommendation of the Committee. The Section on State Medicine and Hygiene had never dealt with the subject of medical jurisprudence. They were totally ignorant of the subject, and were tools in the hands of lawyers and tricksters when they were compelled to appear in the courts. It was important that they should cultivate this subject.

The motion was carried.

The dissatisfaction at the length of the papers read during the morning session was expressed by Dr. Bishop, who asked the President to announce the limit of time given each speaker.

Adjourned until to-morrow, 10 A. M.

THIRD DAY—THURSDAY, MAY 6TH.

President Brodie called the meeting to order at 10 A. M. Prayer by Rev. Dr. R. G. Brank, of Central Presbyterian Church.

OFFICERS FOR ENSUING TERM.

The Committee on Nominations, etc., reported, as follows:

President.—Dr. E. H. Gregory, St. Louis, Mo.

Vice Presidents.—Drs. E. H. Miller, Stillwater, Minn.; W. B. Welch, Fayetteville, Ark.; W. H. Pancoast, Philadelphia, Pa.; and W. C. Wile, Sandy Hook, Conn.

Secretary.—Dr. Wm. B. Atkinson, Philadelphia, Pa.; *Assistant Secretary*, Dr. J. Nevins Hyde, Chicago, Ill.

Treasurer.—Dr. Richard J. Dunglison, Philadelphia, Pa.

Librarian.—Dr. C. H. Kleinschmidt, Washington, D. C.

Chairman Committee on Necrology.—Dr. J. M. Toner.

Judicial Council—(New Members).—Drs. N. S. Davis, Chicago, Ill.; H. Brown, Hustonville, Ky.; Wm. Brodie, Detroit, Mich.; D. J. Roberts, Nashville, Tenn.; R. C. Moore, Omaha, Neb.; T. A. Foster, Portland, Me., and James A. Gray, Atlanta, Ga.

Trustees of Journal of American Medical Association.—Drs. P. O. Hooper, Little Rock, Ark.; A. Garcelon, Lewiston, Me.; and L. S. McMurtry, Danville, Ky.

OFFICERS OF SECTIONS.

Practice of Medicine.—Dr. J. S. Lynch, Baltimore, Md., Chairman; Dr. J. B. Mervin, Kentucky, Secretary.

Obstetrics and Diseases of Women.—Dr. F. M. Johnson, Kansas City, Mo., Chairman; Dr. W. W. Jaggard, Chicago, Ill., Secretary.

Surgery and Anatomy.—Dr. H. H. Mudd, St. Louis, Mo., Chairman. [Dr. John B. Roberts, Philadelphia, Pa., was elected Secretary, but resigned on Friday. Position now vacant.]

Ophthalmology, Otology and Laryngology.—Dr. X. C. Scott, Cleveland, Ohio, Chairman; Dr. J. H. Thompson, Kansas City, Mo., Secretary.

Diseases of Children—Dr. DeLaskie Miller, Chicago, Ill., Chairman; Dr. W. B. Lawrence, Batesville, Ark., Secretary.

Oral and Dental Surgery.—Dr. J. S. Marshall, Chicago, Ill., Chairman; Dr. E. S. Talbot, Chicago, Ill., Secretary.

State Medicine.—Dr. Geo. H. Rohé, Baltimore, Md., Chairman; Dr. W. Wyman, U. S. Marine Hospital Service, Secretary.

Place and Time of Next Session, etc.—Chicago, Ill., First Tuesday in June (7th), 1887—Dr. Charles Gilham Smith, Chairman Local Committee of Arrangements.

The report was adopted.

THE REPORT ON PRESIDENT'S ADDRESS

was read by Dr. A. L. Gihon, of the Special Committee. It advised the Association to memorialize Congress in behalf of the pending resolution to appoint a Scientific Commission of three of the profession to visit the habitats of yellow fever in Cuba, Mexico, and Brazil, with a view to determine the validity of the claims of Drs. Carmona and Trevil to have discovered a means of preventing or modifying attacks of that disease.

The Committee disagreed among themselves as to a recession from the use of the metric system in medicine.

It endorsed the suggestion in favor of new sections on medical jurisprudence and dermatology and syphilis.

It concurred that the several committees should elect their own officers from men of recognized ability and experience, and it was of opinion that the efficiency of the committee would be enhanced by the proposal to make the secretaries permanent.

It endorses the views of the President respecting the *Journal of the American Medical Association*, and of the exclusive proprietary interest of this Association in the papers and reports made as part of its Transactions.

The Association should emphatically denounce the endorsement by certificate, testimonial, or any direct approval

in any form, of proprietary remedies and appliances; and it should instruct its Judicial Council to take action in all such cases without formal presentation of charges, so that the stigma of professional disgrace should rest upon any regular educated physician who allows his name to be advertised as the endorser of any patent, secret, or proprietary medicine.

The Committee advocated the appointment of a committee to consider the desirability of the establishment of branches, or whatever else may be decided best, and to report at the next annual meeting.

The Committee earnestly re-echoed the wish that members of the profession should cordially co-operate in the effort to make the American Session of the International Congress creditable to the country, and attractive and instructive to the foreign members, sacrificing personal and private piques and disappointments thereto, in generous emulation to contribute to that success which had been unconditionally pledged in the invitation tendered the foreign members of the Congress to meet in the United States.

Dr. J. B. Murdock, of Pittsburg, Pa., said the election of officers in the sections had not proved a success, and he would move as an amendment that the report be considered in sections.

Dr. W. T. Bishop, of Harrisburg, Pa., moved that further action on the report be suspended, and brought on as new business.

A point of order against Dr. Bishop's motion was overruled by the chair. The previous question was then proposed and carried, and a wrangle ensued as to which was the "previous question." The chair was occupied at the time by the First Vice-President, Dr. Samuel Logan, who ruled that the motion to adopt the report in its entirety must be put without debate. The report was then adopted.

METEOROLOGY AND DISEASES.

Dr. N. S. Davis, of Chicago, Ill., Chairman of the Committee, read a brief report setting forth the experiments that had been made during the past year. The progress of the work had been aided by the U. S. Signal Service. In addition, he reported briefly concerning collecting investigations of disease in co operation with the Committee of the British Medical Association. The report was referred to the Committee upon State Medicine for publication in the Report of Proceedings.

CREMATION.

Dr. J. M. Keller, of Hot Springs, Ark., Chairman, brought the matter of cremation originally before the Convention at St. Paul, but, fearing violent opposition, allowed it to lie in abeyance. Each year since, it has been called up and purposely referred back without discussion, until at New Orleans it was referred to a Special Committee, to report to-day. The subject has become one upon which much thought and deliberation have been given, and much has been written in advocacy of it. Indeed, so much has been written in its favor, that your Committee deem it unnecessary to do more than offer one or two reasons why fire should be substituted for earth burial—why immediate and complete destruction of disease germs should supplant their dangerous planting and propagation. We believe that earth burial does more to propagate the germs of disease and death, and to spread desolation and pestilence over the human race, than does man's ingenuity and ignorance in every other custom or habit. Not satisfied with doing all the evil we can in life, custom makes us do a thousand fold more after death. From the moment vitality leaves the body, decomposition, inexorable in its laws, begins—in every phase of its decay, slow, repugnant, and dangerous, even to beasts of the field. In no way does earth-burial check or impede, but under certain atmospheric and climatic conditions, rapidly aids and nourishes the death-dealing germ. It only hides the danger that, sooner or later, we take into our stomachs with each draught of spring or well water, or into our lungs with each inspiration. Mr. Darwin, in a paper on the formation of mold, proved that in many places the whole superficial layer of earth has passed through the intestines of worms. In some cases more than three inches of it had been deposited in fifteen years, and in another the depth in eighty years had reached thirteen inches.

Strongly confirmatory of these conclusions are the investigations of Pasteur on the etiology of charbon. He shows that this earth mold, brought up by worms over the graves of its dead, abound with the same specific germ which propagate the disease, and these same organisms fill the intestines of the worms. Who dares deny that the earth burial of any body, dead of a zymotic disease, is simply the planting of the seeds of such disease, sooner or later to grow and reproduce itself and other pestilential troubles? Dr. Friere, in his investigations of the cause of yellow fever in Rio

Janeiro, found the soil of cemeteries in which its victims had been interred, absolutely filled with microbes identical with those found in the vomit and blood of his patients who had died with it. Mother earth a foot below the surface—indeed, from the surface to the body—swarmed with the characteristic germ. Hence his justification in characterizing those cemeteries as the nurseries of the disease.

Incontrovertible proof of the fact that the vicinity of graveyards is unhealthy is superabundant. That cholera, yellow fever, and the zymotic and infectious diseases are propagated by contaminating the earth and air and water supply, is as true as that sewer-gas or sewerage-water propagate disease. Point to a city whose growth has demanded the removal of the dead from its cemetery, that will not attest the truth of the rapid production of disease and death in all neighboring localities. The grave-yard must be abandoned. The “earth was made for the living, not for the dead,” and “pure air, pure water and pure soil” are absolutely necessary for perfect health. Only skeptics deny that the dead do poison these three essentials of human life.

Embalming and mummifying are equally unsafe, and far more disgusting than earth burial; equally repulsive was the ancient German custom of “fire burial.” Modern cremation alone is stripped of all objectionable features. Only a few minutes is necessary to give back to loving survivors all that is worth preserving—a few pounds of harmless, pure, clean, white ashes—a process (the only safe one) the quickest, simplest, and cheapest, leaving no vestige that is repugnant, offensive, or injurious—strictly in conformity to nature’s laws—accomplishing what putrefaction after burial never does. Your Committee begs to amend the original resolution so as to read:

Resolved, That cremation or incineration of the dead has become a sanitary necessity in all populous cities, and that this Association advise its adoption as far as practicable.

J. M. KELLER, Hot Springs, Ark.,
S. LOGAN, New Orleans, La.

A motion was made that it be referred to the Committee on State Medicine. Dr. Keller protested that it had been four years with that Committee, and amendment was offered that it be adopted. Motion to table was lost. The question came up upon the amendment to adopt, which was carried by a standing vote of 114 to 109. Dr. Thad. A. Reamy, of Cincinnati, Ohio, sprang to his feet: “I move the re-

consideration of the resolution that declares the sacred rite, which has existed since the dawn of civilization, a horrid rite. The statements in the report as to the spread of disease through germs is altogether contrary to what is known to be accepted theory on that point. Shall this body, under the gag-law of the previous question, be committed to the declarations of this Committee? I wished the report to be discussed on its merits, and I voted for the previous question in order to gain the parliamentary right to move the reconsideration.

Dr. Keller courted discussion. I propose to show that the objections to this report arise from sentimental and not sanitary motives.

The motion to reconsider was lost. A division was called for, and the reconsideration was voted by 198 to 106.

Dr. John Morris, of Baltimore, Md., then moved to refer the report to the State Medicine Committee.

Dr. Logan supported the report, but did not desire to have it pushed through under gag-law. The matter should be dispassionately considered in the proper Section, which should report to the main body. There would then be ample time for discussion.

The report was then referred as moved.

Address in Practice of Medicine.

Dr. J. T. Whittaker, of Cincinnati, Ohio, said there are three planes in the study of disease. First, the study of the symptoms, or infancy of the disease; second, the observation on the effects or lesions; third, the investigation of the cause of the disease. The progress made in that direction during the last year has been great. The year has not been so prolific in the discoveries of causes of disease as has a number that preceded it, but a much more perfect knowledge of what was known has characterized the period. He spoke of the time that should be spent on a medical education before beginning practice, and dwelt at length upon the germ period of disease. The introduction of specific disease germs will beget specific disease, but bad air, sewer-gas, etc., will not. They may encourage disease, but they will not beget small-pox, fever, or cholera.

Address in State Medicine and Hygiene.

Dr. John H. Rauch, of Springfield, Ill., said the work of State Medicine was confined to purely sanitary measures. It was the duty of the State to protect its citizens from any injury they might sustain at the hands of incompetent phy-

sicians. The improvement of the state of the individual practitioner must result in improvement of the general sanitary conditions. State Medicine was, therefore, the practice of medicine as regulated by the State. The authority of the State to regulate the practice came from the power to prohibit all that is hurtful, and promote all that is beneficial. To protect lives from swindlers, adventurers and quacks is consequently a part of its duty. In the early history of this country, laws were enacted to regulate the practice of medicine. These laws were neglected, fell gradually into disuse, and were one after another repealed, until along in 1830 and 1840, the profession became a free-for-all, and diplomas were almost given away. The standards of acquirements were gradually lowered, and diploma mills were set up all over the country. It was not until after 1870 that any legislative action in this respect was taken; but in the last fifteen years, one after another of the States and Territories have gradually created Boards of Health, and enacted sanitary laws, until now the practice of medicine is regulated in thirty-three States and Territories. In 1859, North Carolina created a State Board of Medical Examiners. The general tendency of legislation is toward securing a recognized standard of attainments, as evidenced by a diploma of graduation from some legally chartered institution in good standing; or, in the absence of this, an examination, more or less strict, in various fundamental branches of medicine. The exceptions are in the States of Alabama, Mississippi, North Carolina, and Virginia, where the diploma is not essential. [But where even more thorough examinations than colleges usually require have to be satisfactorily passed before the party can offer for practice.—Editor *Va. Med. Monthly*.] The standard of acquirements for diplomas has, in consequence, become considerably higher. Since 1763, 224 medical institutions have been founded in the United States, of which 120 still exist, and some of these rank as high as any in the world. In ninety-one of these existing colleges hygiene is taught. Since 1880 these institutions had turned out 23,531 graduates, which was a considerable excess of new graduates over the percentage of increase in the population. Exclusive of the Session of 1885-6, there were 106,947 physicians in the United States, and there had been recently an annual increase of over $5\frac{1}{2}$ per cent., while the population had increased 2 per cent. This excess was demoralizing, and he was in favor of raising the standard of acquirements still higher. He thought that four full years of study, three

terms of lectures, with ample practice, should be the requirements for graduation. He considered it the imperative duty of Congress to protect the health defences of the country. States cannot protect themselves against foreign epidemics without national assistance.

THE REPORT OF THE TREASURER,

Dr. R. J. Dunglison, of Philadelphia, showed a balance in the treasury of \$378.39. The membership was steadily increasing, and it was suggested that the Annual Convention should always be held in populous places, on account of the increase in membership resulting therefrom.

Dr. C. H. A. Kleinschmidt, the *Librarian* at Washington, D. C., reported that 232 volumes had been received during the year, making the total number of volumes in the library 7,030.

On motion by Dr. A. Y. P. Garnett, of Washington, D. C., members are requested to call the attention of their respective Congressmen to the *desirability of making an appropriation of money to assist in heartily receiving and entertaining the International Medical Congress of 1887.*

Section on Dermatology and Syphilis.—Dr. A. L. Gihon offered an amendment to the Constitution, providing for such a Section. Lies over one year.

Amendments to Organic Law.—Dr. Gihon also offered the following, which was adopted: That a committee of nine, including the President-elect and the four Vice-Presidents-elect, be appointed to consider various propositions looking towards amendment of the organic law of the Association by establishing branches, or any other way, if any change may be deemed desirable, and to report at the next Annual Session.

Adjourned until 10 A. M. to-morrow.

FOURTH DAY—FRIDAY, MAY 7TH.

President Brodie in chair. Prayer by Rev. Dr. W. V. Tudor, of Centenary Methodist Church.

The new Section on Medical Jurisprudence organized with Dr. J. N. Quimby, Jersey City, N. J., Chairman, and Dr. H. H. Kimball, Minneapolis, Minn., Secretary.

THE REPORT OF THE PUBLISHING COMMITTEE

was mainly confined to a detailed statement of the work of the *Journal*, the circulation of which was stated to be 4,271,

including 3,374 members of the Association. Credit was taken for a great reduction in the cost of production, mainly resulting from the establishment of a printing office in connection with the *Journal*. Dr. N. S. Davis has consented to remain Editor. The small increase of subscribers was attributed to the dissatisfaction about the Code, and the unfavorable criticisms of some journals about the International Medical Congress. Report adopted.

THE JUDICIAL COUNCIL

declared that the Constitution recognized only State Societies, or County or District Societies affiliated with State Societies. Tri-State delegates could not, therefore, be admitted to registration. The Davidson County Society (Tennessee) had been protested against, but there was not sufficient evidence to exclude the delegates, while, at the same time, they admonished the Society to put itself at once in connection with its State organization. No evidence had been adduced in support of the protest against the Mississippi Valley delegates, which had, in consequence, not been considered; and the same remark applied to the protest against Dr. Dickson, of Kentucky. As to the protest against the delegates of the Philadelphia County Medical Society, the Council, having reconsidered the question, and heard evidence not forthcoming at the first hearing, came to the conclusion that, although the delegates held documents which usually entitled holders to admission, the methods employed in their election were so irregular as to compel their rejection. The Council recommended the refunding of any dues paid by such members, and referred the evidence generally to the Philadelphia State Society for adjudication.

Dr. Roberts (Philadelphia) asked if the report of the Council, with reference to the Philadelphia difficulty, was not presented on Wednesday, and if any effort was made to submit the report, and insinuated that the report was in hand, and could have been produced.

It was resolved that the resolution lie on the table, and that as it reflected on the Chairman and Secretary, all record of it be expunged from the minutes.

Dr. Roberts thereupon tendered his resignation as Secretary of the Section on Anatomy and Surgery, on the ground that the Philadelphia County Medical Society was denied representation. The resignation was accepted, and the Chairman of the Section was authorized to nominate a Secretary.

Dr. Jackson, of Pennsylvania, presented the following protest, signed by the six disqualified delegates:

"We, the undersigned, regularly accredited delegates of the Philadelphia County Medical Society to the American Association, earnestly protest against the action of the Judicial Council, by which one of the oldest and largest County Medical Societies in affiliation with the Association—one that has never violated its code of ethics or its laws—has been denied representation in the Thirty-seventh Annual Meeting of the Association."

A vote of \$200 to the Permanent Secretary was proposed, but at the request of Dr. Atkinson, was withdrawn.

The report of the Section on State Medicine was adopted. It contained a reference to a deputation from the W. C. T. U., and reaffirmed resolutions passed by the Association at St. Paul and New Orleans, affirming that the use of alcohol had very detrimental effects on the human race, and recommending a course of study in hygiene, with special reference to this point, in public schools, and welcoming any change in public sentiment in this direction. It also stated that alcoholic drinking was the cause of much physical and mental disease, and of a large proportion of crime and pauperism.

Dr. E. H. Gregory, St. Louis, President elect of the Association, on being introduced by Dr. Brodie, was loudly cheered. He said the day was a happy one for him. Every honor bestowed on him had been always highly appreciated, and of late years honors seemed to have been showered on his gray head. But a few days since he had been elected President of his home Society, and now he was called to this exalted office.

Dr. Brodie, in closing the Congress, thanked the members for their kindness. He especially rejoiced that the proceedings had been marked with so much harmony, and that so many matters which seemed to be in danger of causing ill-feeling had been amicably settled.

Adjourned *sine die*.

PROCEEDINGS OF SECTIONS.

SURGERY AND ANATOMY.

FIRST DAY—*Tuesday, May 4th.*—Dr. Nicholas Senn, Milwaukee, Wis., Chairman; Dr. H. H. Mudd, St. Louis, Secretary.

Venous Blood Tumors of the Cranium in Communication with the Intra-Cranial Circulation—Especially the Sinuses of the Dura Mater.

Dr. Wm. M. Mastin, of Mobile, Ala., forwarded a paper containing the following propositions:

Cranial venous blood tumors are to be classified into three types—1, congenital, spontaneous, and traumatic; 2, these types are divided into the diffuse, the venous, or the vascular, in which the tumor is formed at the expense of the coats of the veins; 3, the venous type is most common, and of this type the diffuse is the rarest of all varieties; 4, the diffused variety is especially characteristic of the spontaneous and also of traumatic bruises. The venous type occurs most frequently congenitally. General surgical interference is not called for. When, however, operative interference is deemed proper, it may be either for the diffused or the varix. Exposure and ligation of the pedicle, or, if necessary, delegation in its course, the trephine being employed only to furnish the required space. Lateral ligation and section were preferred to complete ligature. For tumors composed of varicose vessels the electro puncture or strangulation of the veins may be adopted, with preference for the former.

Value of an Attempt at Enucleation of a Neuroma which Seems to Demand Resection of the Nerve.

Dr. Moses Gunn, of Chicago, Ill., detailed a case in which resection of the ulnar nerve was to be performed for a very large neuroma of that nerve. On cutting down to the tumor, however, simply an exploratory incision was made. The tumor was enveloped by a distinct capsule, nearly half an inch thick; this was split and the tumor turned out. Dr. Gunn explained his effort at nerve-grafting in this case, which he resorted to in the second operation on it when he resected. At that time, he thought he was the originator of the procedure, but he has since discovered that an eminent French surgeon had, a few years before, resorted to the same means to reinnervate the parts necessarily paralyzed by the operation. He took the distal end of the divided

ulnar nerve and grafted it into the median whose sheath he had divided—thus establishing a different route for the transmission of nervous influence. The approximation and union of particular sensory and motor nerve fibres after resection of a portion of the trunk could not possibly be brought about. It is the machinery at either end of the fibre which determines the kind of influence conveyed by it, and not the fibre itself. There was some restoration of the functions of the parts supplied by the ulnar nerve—both motor and sensory influences exhibiting themselves in them.

Fibre, or Spindle-Celled Sarcomatous Tumors.

Dr. B. A. Watson, of Jersey City, N. J., exhibited a pathological specimen from the posterior surface of the thigh—the posterior part of which tumor was deeply grooved by the great sciatic nerve, and reported the history of the case of this rare condition. He gave a diagnostic table of sarcoma of the breast and of carcinoma.

Treatment of Thoracic Aneurism by Introduction of Wire.

Dr. Joseph H. Ransohoff, of Cincinnati, Ohio, reported a case of aortic aneurism, treated by insertion of wire. Happily for our art, he who is thus afflicted can, at least with a fair prospect of a successful issue, rely upon one or the other methods recognized as *radical* in the treatment of this disease. There are cases of aneurism which are not amenable to ligation or compression—notably, those of the aorta. He described methods of treatment, including galvano-puncture, distal ligation, and the introduction of foreign material into the sac. The latter method, adopted in this case, will prove interesting and instructive. He reported a case treated at the Good Samaritan Hospital, Cincinnati. A man, a moderate drinker, always enjoyed good health, free from syphilis, while rowing a boat evidently developed aneurism of the aorta. The diagnosis was sacculated aneurism of the ascending aorta, with perforation of the chest walls, unattended by atheroma or cardiac hypertrophy. The treatment was restriction of diet, iodide of potash, and hypodermic injections of morphia, with apparent benefit. This was dissipated two weeks afterwards by a severe spell of vomiting, during which there was an aggravation of symptoms. During the third and fourth weeks ergotine was given subcutaneously without benefit. It was at this time Loreta, of Bologna, reported his favorite case of aneurism of the abdominal aorta, giving a new impetus to Moore's method of treating aneurism. Considering this the only method to be employed, a

straight hollow needle, with thumb-screw attachment, was pushed into the aneurism from the right side. No technical difficulty; pain slight during the introduction of the first four feet of wire; then serious symptoms appeared, after which reaction came on, and the remainder of the wire (94 inches in all) was introduced. No hæmorrhage attended or followed the operation. Ice-bags were applied to and over the sac, and opiates given. The patient appeared to improve from day to day for two weeks, when, on July 5, symptoms were aggravated. In the further hope of cure, ninety eight inches more of wire was introduced, but on July 13 the patient was found dead in bed. The autopsy showed in the outer and upper third of the sac a firm, laminated clot, of considerable thickness. Throughout the sac of the aneurism, imbedded in firm and recent clots, numerous coils of silver wire were found.

1st. Was the operation justifiable? Yes.

2d. To what extent did it imperil the patient's life? To a limited extent.

3d. Did it offer any prospect of radical cure? He thinks so.

4th. Do the cases hitherto reported, in which this plan has been applied, warrant its repetition? Yes—by the literature of the subject.

The author closed with a history of various cases of this kind.

Incision and Drainage of Lumbar Abscesses.

Dr. E. A. Andrews, of Chicago, Ill., advocated opening such abscesses freely, so as to allow introduction of the finger for thorough exploration. Make counter openings and wash out the abscesses and sinuses with antiseptic solutions. Some cases recover after simple aspiration and washing out the cavity with antiseptic solutions. If this fails, or is inapplicable by reason of the abscess having been already opened when coming under treatment, free incision and washing out with antiseptic solution should be resorted to at once. Modern treatment, aspiration and antiseptic injections had exploded the old notion that it is a dangerous affair to open and evacuate the pus from the abscesses.

Dr. W. A. Byrd, of Quincy, Ill., heartily agreed with Dr. Andrews. He desired simply to call attention to what he considered the very best antiseptic injection, an agent which he had been using for some months with great satisfaction—viz., the peroxide of hydrogen, which would destroy and remove every particle of pus. It would also give the advan-

tage of hyper-distention by the formation of gas in the cavities.

Dr. C. H. Finger, of Illinois, regards lumbar abscesses as simply symptoms, and does not think that simple evacuation of the contents can be regarded as good surgical treatment. It should be the aim to remove the cause.

Dr. Hamilton, of Ohio, in many years of practice and teaching, had found no other so common evidence of incompetency and inefficiency among practitioners as the frequent failure to recognize the presence of lumbar abscesses.

Dr. Ransohoff emphasized the statement of Dr. Finger—that lumbar abscesses are only symptoms, and holds that unless the cause can be removed, free incision and drainage is bad treatment.

Dr. Geiger's experience with these cases had been unfortunate. He considered it a matter of great importance that the after-treatment of these cases should be in the hands of competent surgeons.

Dr. Andrews said there was no way of diagnosing these cases in the very commencement. When pus has formed to such a degree as to cause pressure, there will be some elevation of temperature; and as soon as there is reasonable probability of the presence of pus, it may be determined positively by the use of the aspirator. He does not favor the use of the knife until there is some physical evidence of the presence of pus. Incision is only a means to an end, rendering possible fuller exploration, and the adoption of means of treatment which would be otherwise impracticable.

Dr. Byrd, of Illinois, then read a paper, prepared by his assistant, recounting a case of *Intravenous Injection of Saline Solution for Collapse from Hæmorrhage*, in which he injected eighty ounces of a saline solution into a vein of the arm.

SECOND DAY—WEDNESDAY, MAY 5TH.

Surgical Relations of Ileo-Cæcal Region.

Dr. J. McF. Gaston, of Atlanta, Ga., designed by his title to include all the conditions calling for surgical interference in the ileo-cæcal region. There are two classes of such cases—viz., those in which there is a degeneration of tissue in immediate relation with the cæcum and colon, which may result in malignant growths pressing upon and interfering with the function of the intestine; or there may be suppurative inflammation forming sinuses in all directions, and bursting

through, either externally or into the bowel, may set up a long train of sequelæ by extension of inflammation to the adjacent tissues, or septic influences may be introduced and greatly aggravate the trouble, especially in cases of women. Sutton advanced the view that inflammation is not essentially pathological, but is reparative, and only becomes pathological when it is excessive. It may be simple or specific, and bacteria are destroyed by inflammatory action, according to his view. In Germany surgical procedures, in cases of ileo-cæcal trouble, are generally too long delayed; still there can hardly be a grosser error than to adopt the position that such affection always demands surgical operation. Statistics show that less than ten per cent. of cases with invagination recover. He favors exploratory incision, and active procedures for the relief of obstruction, etc. He summed up his results with the following conclusions—viz: 1, Certain forms of such trouble are sometimes spontaneously corrected; 2, In cases of extra-peritoneal inflammation and suppuration, puncture and incise; 3, In disorders involving the peritoneum, incise and explore; 4, When there is a stenosis or a malignant growth, ileo-colostomy is to be performed; 5, Gangrenous portions should be resected; 6, Operative measures, if demanded at all in the ileo-cæcal region, should not be delayed, but performed at once.

Proper Treatment of Penetrating Wounds of the Abdomen.

Dr. Henry H. Smith, of Philadelphia, Pa., said that among the marked changes of surgical doctrine none are more striking than the opinions held by many in regard to the developments and results of peritonitis after injuries that involve this membrane. That inflammation of serous membranes presents rapid changes of a circulation, sensibility, secretion, attended by marked constitutional disturbances, have been long admitted, and the apprehensions felt as to the result have been generally regarded as well founded. Yet such fears have not been universal, Marjolin, in 1832, having stated that he had often seen wounds of the peritoneum cured without any disturbing accident, while it was well known that paracentesis abdominis could be repeatedly performed without creating peritonitis. At the present time doubts on this subject are very much on the increase, it being asserted that the pleura can be perforated and serous effusions evacuated without inflammatory symptoms. McGay recommends such incisions into the serous linings of parts as will give permission to the passage of other products. But

gunshot wounds of the peritoneum are occasionally untended with fatal results. As, for instance, in the case of the wars of Napoleon at the attack on Cairo, in the Egyptian campaign, Larry, reported the case of a gunshot wound that left two ends of a loop of an intestine extending, and in order to relieve the patient they enlarged the wound, returned the intestines to their proper place, and the patient eventually recovered. Numerous cases were cited, and surgical treatment strongly urged when such heroic treatment seemed at all necessary.

Dr. B. A. Watson, of Jersey City, N. J., who was supported in his remarks by Dr. Jno. B. Hamilton, of U. S. Marine Hospital Service, and Dr. Henry O. Marcy, of Boston, favored the exploratory incision in penetrating wounds of the abdomen, citing in justification of the procedure the small amount of risk incurred, and the benefit of discovering absolutely the trouble.

Dr. E. H. Gregory, St. Louis, was opposed to the indiscriminate opening of the abdomen—even by exploratory incisions, now so generally resorted to. He thought it was only because it was easy of execution and brilliant in its report that it was so frequently performed. He looked upon the symptoms presenting themselves as the pivot point upon which turned the question of opening or not the abdominal cavity. He favors Listerism.

Dr. Jennings mentioned a case where all the intestines gushed out through an abdominal wound, were washed with a simple saline solution; the three-quarters-of-an-inch rent closed with five interrupted sutures, and the patient recovered. [See a more remarkable case in May No., 1886, *Va. Med. Monthly*, by Dr. W. J. Harris, of Blackstone, Va.]

Amputation at Hip-Joint for Disease of that Joint.

Dr. Donald McLean, of Detroit, Mich., believed that in cases of morbus coxarius, when the femur is extensively involved, hip-joint amputation is often preferable to excision, and leaves the patient in a better subsequent condition. This point I sustain by a case which came under my care. A gentleman of Muncie, Ind., eight years ago fell on the ice and sustained a contusion of the hip, which gave him great pain for a few days. Then it became easy, and was apparently well. The following winter, however, he was forced to use a cane in walking. Liniments and electric appliances rendered him no relief. Then he used a brace, and a dozen or more prescriptions, and in spite of all these measures the

disease progressed. These all at least have the merit of rationality to justify them, but they failed; and eighteen months ago an abscess formed on the hip. It was opened; and later a swelling appeared, and was likewise opened; but the disease was apparently growing worse. He was much emaciated, but his general health was good. The hip-joint was out of shape and immovable. The disease of the bone was such as not to admit a hope of cure, and the joint would be unsightly if it had been cured. Amputation presented itself as the only hope. The operation was performed in March, and the patient now is enjoying perfect health.

THIRD DAY—THURSDAY, MAY 6TH.

Digital Exploration of the Bladder.

Dr. Wm. F. Belfield, of Chicago, Ill., said by an incision from the peritoneum into the membranous urethra the finger can be introduced at a point corresponding to the location of the meatus, and the bladder is thereby rendered accessible. This method in the male was brought prominently before the profession as a means of diagnosis some three years ago by Sir Henry Thompson and Mr. Whitehead. By it the surgeon is also enabled to differentiate between disorders of the kidney and bladder; and he can often readily relieve a "cystitis." This term, cystitis, by the way, should be relegated, with jaundice and dropsy, from the list of diseases to the catalogue of symptoms. It is, apparently, always secondary to some tangible abnormality in the urinary or pelvic organs, or in the spinal cord. Yet the operation can be made unnecessarily, and even with disastrous results. Like many other surgical procedures, it is safe only when the surgeon possesses an intelligent comprehension of the conditions involved.

"As essential preliminaries to a diagnostic exploration of the bladder,

- (1) It should not be performed as a diagnostic measure until it is reasonably certain that the seat of the difficulty is in the bladder, or, until all other and less radical diagnostic means, including the microscope, have been exhausted.
- (2) This operation should never be performed until the bladder has been accustomed to complete evacuation by catheter or otherwise. If, in consequence of a stricture or prostatic obstruction, the bladder is much hypertrophied, membranous urethrotomy is dangerous—simply because a cysto-pyelitis usually follows the sudden removal of the ac-

customed high pressure in the bladder. Therefore, before the bladder is explored, the organ should be gradually accustomed to evacuation; the stricture should be enlarged, or the prostatic obstruction overcome by the habitual use of the catheter."

Treatment of Anal Fistula Associated with Phthisis.

Dr. E. E. Glover, of Terre Haute, Ind., said that authors, in speaking of treating fistula in conjunction with phthisis, have generally taught that operative interference is unwise, as certain in resulting in injury to, or often in hastening the death of the patient. This opinion has been held as an axiom of both professional and popular belief, from an early day, and is probably now so held by a majority of physicians. But after much study, and consultations with eminent practitioners, he thinks that operative interference is advised and practiced *with benefit* to the patient, except where the cough is constant, unless this be first allayed: where the disease is rapidly advancing, or is far advanced, and where the reparative powers of the patient are so low that they evidently are unequal to the task of healing the wound. Although it is proper to operate during any season, preference should be given to pleasant weather, such as will allow the patient to be in the open air. Where the tissue surrounding the fistulous tract is tubercular, some advise its removal by the knife or sharp spoon. The wounds heal in nearly every case in which an operation is justifiable. There should be as little interference with the sphincter muscles as possible. The suppression of the discharge is thought to be positively beneficial. Some recommend that where the discharge is supposed to have a beneficial derivative effect, a seton be inserted in the arm, or other eligible part, before operating on the fistula. It is believed that a successful operation tends to retard the progress of the disease, and to prolong the life of the patient.

Dr. J. B. Johnson thinks the effect of arresting the drain by the fistula is calculated to intensify the morbid process of the lungs.

Vertical Extension in the Treatment of Fracture of the Femur in Children.

Dr. J. M. Barton, of Philadelphia, Pa., said the treatment of fracture of the femur in children has always been attended with great difficulty. The fragments are so short they are not readily grasped by the dressings, and are, as a rule, with difficulty maintained in position. The dressings are soon soiled, and the frequent renewals interfere with the process

of repair. The displacement of the dressings by the patient, causing injurious pressure, necessitates frequent examinations, especially when the child gives evidence of discomfort. St. Bartholomew Hospital Reports for 1867 show that Messrs. Paget and Callendar treat many cases of fracture of the thigh in children without splints—all apparatus being dispensed with, the child being placed on a hard bed, with the broken limb, after setting it, bent at the hip and knee, and laid on its other side. The plaster dressing is valuable in these fractures, and as usually applied, with short splints around the femur, and a long splint reaching from the axilla to below the foot, thoroughly covered in with plaster, bandaged, and either varnished or covered with oil-silk to protect it from the discharges, has often given admirable results. If dressed immediately after the injury, the subsequent dressing may cause injurious pressure; and if the dressing be made loose enough to allow for the swelling, or be deferred until it has occurred, the fragments will be but poorly supported after the swelling has disappeared. On removing the dressings, when the treatment has terminated, I have frequently felt considerable uncertainty as to what sort of a limb would appear.

Now a method of treating fracture of the femur in children by vertical extension is described, and claimed as original by Bryant in his *Surgery*, published in 1873, and also in later editions. Only a few surgeons have had any experience with the method, as it is not in the text-books. Bryant places the limbs in a right angle with the pelvis, and fixes them by a light splint, and then they are hoisted upward and fastened to a hood or bar above the bed. This has been slightly modified, substituting counterpoise weights for the simple fastenings.

I had a case of a small child, in 1884, in which I tried the plaster dressing; but in a few days I was forced to remove it, and substituted this method. The usual adhesive plaster, carried well above the knee, the same as is used in making extension in adults in the ordinary method of treatment, was applied to the sound as well as the injured limb. After the plaster had become firm, a frame, extending across the bed, and about four feet above it, was placed in position—such a frame as is usually used for swinging horses, consisting simply of two uprights, one on each side of the bed, and a light bar connecting them. In the lower edge of the transverse bar connecting them, four iron pulley-wheels had been fastened, two about the middle, a few inches apart, and one at

each end, close to the uprights. The limbs of the child were elevated at a right angle with the rest of the body; the cord from one of the adhesive plasters on one of the limbs was carried through one of the middle pulleys, and the other was carried in a similar manner through the other side. The heaviest weight was attached to the injured limb, and only enough to the sound leg to keep it fully elevated. The fracture came immediately into good position, and thirty-five days afterward she was discharged, entirely cured, without either shortening or deformity.

Dr. Quimby did not see the advantage of this position; he favored Buck's extension plan.

Dr. Link thought too much stress was laid on extension and counter-extension. The three essentials in treating fractures are bandaging, flexion, and rotation—bandage to control spasmodic action, and then flex and rotate outwards to relax muscles.

Some Complications in Strangulated Hernia.

Dr. R. Harvey Reed, of Mansfield, Ohio, reported a case in which a small obscure femoral hernia was complicated with hydrocele, enlarged and adherent testicle, and a large, reducible, inguinal hernia, which was supposed to be the chief source of difficulty. Another was a case operated upon by Dr. Senn. The omentum was adhered to the whole inner surface of the sac, and it was necessary to remove the whole mass, and unite the edges of the ring; these were freshened and closely sutured. The result was complete cure. Another patient made unnecessary muscular exertion while the wound was yet ununited, with the result of a new protrusion and a rupture of the protruding bowel. The parts were thoroughly cleansed, the rupture of the bowel was closely sutured, and the patient made a complete recovery.

Plea for Radical Operation for the Cure of Hernia.

Dr. Henry O. Marcy's (of Boston, Mass.) operation consists in ablation of the sac, freshening the pillars, and suturing them with chromicised kangaroo tendon sutures. He thinks this operation far superior to those advocated so zealously of late years by Dr. Warren, of Boston, and others—viz., by injection of an astringent liquid; this method he objects to, as being essentially blind surgery. Operative interference of this nature is demanded wherever there is strangulation, where there is failure of the truss to retain the hernia; and in infantile hernia, which is with difficulty

controlled by the truss, the kangaroo-tendon sutures are exceedingly satisfactory. He was the first to introduce this material to the profession.

Dr. Hoadley reported an operation in which he had taken pains to ligate the freshened edges of the pillars as closely as possible; he laid considerable stress upon the importance of this close suturing in order to obtain perfection.

Dr. Quimby thought operation should be performed within twelve hours after indications are apparent.

Dr. Smith, of Iowa, used to be very timid of removing omentum, but now has no hesitation in doing this when necessary.

Ossification of Tendon of Abductor Magnus Muscle.

A Committee of Drs. Gunn, of Chicago, Dawson, of Cincinnati, and Barton, of Philadelphia, was appointed to examine a young man, who, some months ago, was thrown upon the pommel of his saddle. Since that time he has been subject to pains in the abdomen—not so severe as to necessitate a discontinuance of labor, but at intervals of about a month—enough to occasion severe suffering. His physician recently discovered an adventitious growth at upper inner part of the thigh, which it was thought might have some relation to his pain. The committee agreed that the hard mass was the result of an ossification of about two inches of the tendon of the abductor magnus muscle.

How the Iliac Arteries Act as Valves Upon the Venous Flow into the Inferior Vena Cava.

Dr. Charles A. Todd, of St. Louis, stated that the absence of valves in many of the cranial and thoracic viens was of little importance; but the arrangement of the vena cava required one. The function of a valve in this cava was performed by the iliac arteries, which are so placed, relatively to the vein, that when they expand with the outflow of blood, they compress the vena cava to a considerable extent—thus supporting the column of blood above, and equalizing its flow.

Osteoplastic Resection of Foot—Whadirniroff's and Miculicz's Excision of Heel.

Dr. Charles H. Finger, of Chicago, Ill., illustrated by a large drawing, by a plaster cast, and by the bones of a skeleton, the method of performing the operation as devised by the Russian and German surgeons independently, exsecting the calcaneum and astragalus, and removing the cartilaginous

ends of the tibia and of the scaphoid and cuboid bones, and bringing the sawed surfaces together, so that the patient can step upon the toes. He described a modification in the lateral incision by which he secures a fuller supply of blood for the nourishment of the foot than is gained by the operation as previously performed, making a decided improvement in it. The indications for the operation are—1. Extensive injury to heel and adjacent parts of the foot; of the nineteen recorded cases, not one has been done to meet this indication. 2. Caries, or tuberculosis of the os calcis and adjacent tissues; this is the most frequent cause noted. 3. Extensive disease of the soft part of the heel. The after-treatment consists of keeping the foot at rest upon a splint, either of plaster, or an interior and posterior.

Dr. McLean spoke strongly in favor of Syme's operation. He had made Syme's operation thirty-three or thirty-four times, with generally very satisfactory results.

Dr. Quimby described an operation of his own devising, in which there is only a partial excision of the os calcis, and no disturbance of the cartilage of the tibia; but the cut surface of the os calcis is turned up into contact with the cartilage of the tibia. He has found the results to be satisfactory, and especially advantageous in the case of young children; as by this method the development and growth of the tibia is not interfered with.

Dr. Robert Newman, of New York, read a paper on the *Galvano-Cautery in Diseases of the Prostate, Bladder and Urethra*, exhibiting the apparatus, and showing how to use it.

Adjourned *sine die*.

PRACTICE OF MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

FIRST DAY—*Tuesday, May 4th.*—Dr. J. T. Whittaker, Cincinnati, Ohio, Chairman; Dr. B. L. Coleman, Lexington, Ky., Acting Secretary.

Etiology of Diseases.

Dr. Albert C. Haven, of Lake Forest, Ill., read the first paper with the above title. He said that the passage, "The Lord God formed man of the dust of the ground, and breathed the breath of life into his nostrils," states the origin of *life*,

and we know as much of it as of any other *force*. Living matter presupposes antecedent living matter. It is heterogeneous, although it appears homogenous to the chemist and microscopist. The protoplasms of the elephant and of man are identical, yet how different in deportment! The fixed tendencies are not the result of chance, but of law. Evolutionists believe that the fully formed body exists in the primitive cell or ovule, and that its development produces the mature individual or plant. Others believe in the theory of epigenesis. Hækel believes in perigenesis. Darwin formulates the theory of panogenesis. The ovule contains atoms from every organ of the parent, and these simply develop, reproducing the original organic forms. Whether the theories be accepted or not, we must recognize that *all vital phenomena are governed by law*. All laws tend to perfection.

The *origin* of all diseases can be traced to external causes. Many unsatisfactory *causes* of disease are given. "Exposure to cold! Has any one seen the vaso-contractor and vasodilator nerves? Do sewer-gas and decaying vegetables produce malaria? What is malaria? What is the carcinomatous diathesis? Theory, with a little smattering of science from which to weave the fabric of etiology of disease—that is all. True science is based upon the Baconian system of induction—observing nature, collecting facts, and deducing laws. What laws have been deduced? Where has there been more speculation and idle dreaming than in medicine? The profession is as ignorant as a savage of the etiology of a large number of diseases.

Richardson's classification of diseases is probably the latest, but none more satisfactory. His is as follows:

I. Phenomena, having their origin in causes which in one or another form are persistently present, are parts of the natural order of the universe, are inseparable from that order, and are, therefore, beyond human control—as temperature, lightning, earthquakes, etc.

II. Phenomena, having their origin in causes which, though springing out of nature in some unknown way, and though difficult of control, are, nevertheless, under an improving knowledge, "controlable"—such as the contagious, infectious and many hereditary diseases.

III. All diseases due to old age.

IV. Phenomena of disease dependent on such causes as modes of life, and self-imposed acts of a person or country.

Dr. Draper observed that inhalation of ozone caused catarrhal symptoms. Does this agent sustain a causal rela-

tion to disease? It has heretofore been considered healthful. Rheumatism and neuralgia often result from increased atmospheric pressure. The theorist, having tired of all other theories as to the cause of zymotic disease, now turns to the germ theory, which is looming into prominence, despite the obstacles thrown in its way. Dr. Haven concludes with an able review of the recent great work of Pasteur and other bacteriologists.

Effects of Certain Physiological Principles Noticed in Aid of the Circulation of the Blood.

Dr. Francis E. Hitchcock, of Rockland, Me., took for his text the statement that "Blood has greater cohesion than water." Viscidity is a quality of all liquids, expressed in different degrees. It is greater in blood than water. While cohesion amounts to the same thing as a physical force, holding together particles of matter, viscosity and cohesion resemble each other. There is no difference from the cohesion of liquids. It is a peculiar property whereby they resemble solids when acted upon by eccentric forces. The venous system is compared to a cone, with apex at the heart and its base represented by the periphery of the body. It might also be said that its base is connected with that of another cone similarly representing the arterial system. Each contraction of the ventricles is a force exerted with the same, if not greater, effect on the venous circulation, as on the arterial through cohesion. Whatever may be the effect of valves in the inferior veins towards relieving gravity on the lower vessel, it must be remembered there is another column of blood without valves pressing downward with all the force of gravity as well as that of the arterial wave. If these lower vessels were compelled to sustain a pressure it is easy to see what the effect would be. Fortunately, the force acting throughout the venous cone, reaching even the arterial wave, so far unloads the inferior vessels that the effect of gravity, during the interval this force is at rest, can do no more than fill these vessels to the normal tension.

The paper in addition referred to topics such as the explanation of the untoward effects of hypodermic injections, syncope from chloroform, the action of nitrite of amyl, etc.

Essential Vertigo.

Dr. L. Bremer, of St. Louis, Mo., said that impairment of equilibrium with strange sensations of varying kinds and degrees, is met with as a symptom, not only of cerebral, but of a great many other diseases, especially those of an ex-

hausting and debilitating character. Besides the physiological vertigo produced by rapid rotary movements or by a sojourn in high places, temperate pathological giddiness or dizziness is not uncommon with many persons enjoying in other respects good health. In fact, there is scarcely an adult who has not experienced vertigo of some kind. Therefore, vertiginous sensations fall within the boundary line of health and may constitute a well-marked disease. The moral effect of the same degree of vertigo is involved with the individual moral and mental disposition of the patient; and to one an attack of vertigo of a certain intensity will appear of the gravest importance, which to another would be ignored. The physical effect will tell more upon the excitable than the phlegmatic. The fear of the former will be aroused and exert a powerful influence against the improvement of the patient's condition. Children seem less disposed to the trouble than adults, or perhaps are less likely to speak about it than adults, who have an idea, however vague, of its seriousness.

The English expression, giddiness, dizziness, light-headedness—all comprised in the term vertigo—signify a number of totally different affections. They are frequently used promiscuously, and may mean loss of balancing power, simple fullness or pressure in the head, faintish feeling, temporary confusion of thought or bewilderment, and strange and indefinable sensations in the head in general.

The kind of vertigo of which I shall speak shows a tolerably well-defined and circumscribed picture. I have chosen the name *Essential Vertigo*, as suggested by Nothnagel. This affection must be classified with nervousness. I therefore include those cases that are due to disturbances of vision, hearing, or digestion; to the gouty diathesis, epilepsy, malaria, cardiac trouble, acute affections, and organic diseases of the brain.

The patient is generally, though not always, more or less anæmic looking, debilitated, and nervously exhausted by overwork or disease. The vertigo may have come on suddenly, or after certain premonitory signs, while walking, sitting, or lying down, during the day or night, often in the midst of apparent perfect health; at other times, upon the supervention of slight ailments, acute catarrh, indigestion, or other troubles of the system. The victim feels as if his full strength had dropped away from him, as if the ground was drawn from under him. He is at sea, unstable on his legs, and, as if on board a ship, he straddles in order to en-

large his base, or grasps the nearest support. In severe cases he actually falls to the ground; but this is done in co-ordinate measures, unlike any epileptic attack. If the attack be severe, and the patient not yet accustomed to vertiginous feelings, a very striking symptom is the intense terror, a vague fear of becoming paralyzed; of dropping suddenly out of existence. Generally speaking, essential vertigo comes on by spells, the whole attack lasting only a few minutes. Sometimes, however, the patient is unable to return to daily employment, to do anything at all for weeks, and even months. Such patients are of a nervous temperament, and their nervous systems are so wrought upon that they want to move almost constantly, thinking every other spot safer than that which they are upon. Their hearts beat rapidly, and they cannot bring themselves into an absolute quiet. But the heart's action in persons less nervous, and who are accustomed to vertiginous attacks, remains normal. One gentleman under treatment counted, during some of his attacks, thirty-six beats a minute, whilst in others, especially when they occurred in rapid succession, the pulse would run up to 120 beats a minute. After the vertigo has ceased, relief may be complete, the patient remaining free from the trouble for days, weeks, and even months; but the rule is, recurrence at short intervals. In many cases the attacks leave a physical depression and great anguish behind it, the patient being in great fear of a reappearance of the trouble. In this state of mind, even slight vertiginous sensations, the most insignificant possible, will predispose to another spell. This distrust and fear is, in some instances, carried so far that an occasional misstep on the street, a staggering over an object on the ground, will make him think it another attack. In fact, this imaginary vertigo may be turned into a real one. Thus a vicious circle is established, in which cause and effect are intimately blended, and cannot be distinguished the one from the other. It is very rare that vertiginous patients are not affected by the auditory or visual apparatus, and especially the stomach and heart. A lower tone of the whole nervous system, presenting often unequivocal neurasthenia in its manifold manifestations, is met with in all cases of confirmed vertigo, either as a cause or a result, or both.

I once treated an attorney of middle age, who had come of a dipsomaniac father and a slightly hysterical mother, for vertigo. He had lived a somewhat irregular life; and as he was one day crossing a public square, he suddenly had a

vertiginous attack, and saved himself from falling only by grasping a tree near by. In a few minutes he was able to walk on. But he did not so soon recover from the nervous shock, and for a long time afterward he feared to pass the spot where he had suffered the attack. Finally, however, he overcame that fear, and was apparently well. But he avoided large gatherings and places of intense excitement. But it was not long until he was again attacked. This time the sensation came while he was standing with his head thrown back, viewing the roof of his house, and fell to the ground.

That was a case of essential vertigo. The man was not a nervous person, and there was no disease of vision, audition, or digestion; neither was there excitement to cause it. Now, psychical impression of the first attack, the subsequent fear of the tree near which it occurred, the general diffidence and demoralization, deserve special attention. They illustrate the usual effects of an attack of essential vertigo.

There can be no doubt that our body is properly balanced by a number of different impulses, which in turn react on certain different nerves to call into action certain muscles. Instead of one single equilibrial centre, there is a complete nervous machinery, composed of very different and specialized nerve elements, the harmonious operation of which constitutes the balancing power. In short, there are a number of balancing or equilibrial centres, corresponding to a number of equilibrial peripheral nerves. An injury or functional impairment of any part of this equilibrium mechanism, central or peripheral, will be followed, by inco-ordination, by vertigo.

There is, consequently, a vertigo of peripheral and one of central origin. It is the latter which, in the absence of coarse lesions, constitutes essential vertigo. It probably depends primarily on vaso-motor disturbances, which secondarily give rise to weakness and irritability of the cells of the equilibrial centre. The centres, being situated in the mid-brain, are nourished by branches of the basilar artery. A spasm of this artery, or any of its branches, determines impairment of nutrition, and consequently of functions of the equilibrial cells. By repeated attacks of such arterial spasms there is set up a permanent weakness of the centres. Hence the apparent aural, ocular and stomacheal vertigo in the nervously exhausted who are free from organic or gastric diseases.

But the starting point of the disease may not be in the upper divisions of the brain. It may be down in the me-

dulla oblongata, especially in cases where famishness is a complication.

Again, vertigo is one of the commonest symptoms in structural diseases of the cervical portions of the spinal cord; whereas it is absent in the lesions confined to the dorsal and lumbar portions. Then the morbid fear under which the patient labors may also be referred to a functional derangement of the medulla oblongata. Various forms of morbid fear result from vertiginous attacks.

The forms of vertigo vary with the parts of the brain implicated. Thus we have one form where the cerebrum is affected, and another if the seat of trouble is in the medulla oblongata. The essential vertigo is essentially a disease of middle life, and the remote and most important cause of it is a nemotic disposition, and a general imperfect nutrition of the brain.

In speaking of the treatment, he dwelt upon the importance of care in the diet, dressing comfortably, and avoiding exposure and undue excitement, and a moderate use of "the great palliator remedy"—alcohol, without which the difficulty of treating vertigo would be great.

So-called Antiseptic Doses of Quinine in Typhoid Pneumonia was the title of an able paper by Dr. O. T. Shultz, of Mt. Vernon, Ind. He said that in typhoid pneumonia, quinine not only reduced temperature, but exercises also a favorable influence upon the course of the disease. He advocated early administration as soon as typhoid symptoms appear; and in most cases it should be begun on the fifth day of disease, in doses of fifteen to thirty grains, given every evening if the temperature be over 102° . If the heart should be weak, the dose is to be preceded by brandy or whiskey.

Prevention of Insanity.—Dr. Gustavus Elliott, of New Haven, Conn., read a paper on this subject.

SECOND DAY—*Wednesday, May 5th.*

Life and Labors of Louis Pasteur.

Dr. S. S. Laws, of Columbia, Mo., read this biographical sketch of the immortalized scientist, [to whom also our Paris correspondent in this issue makes some interesting references.]

Louis Pasteur was born of humble parents, December 27, 1822. His labors have been extended over forty years. He is a member of the French Academy of Sciences, and in recognition of his discoveries, the French government, in 1874,

granted him a pension of 20,000 francs a year. His maiden exploit was, when about 24 years of age, in the domain of molecular physics. The occasion was the problem laid before the French Academy by Mitscherlich, the German chemist, of the inexplicable difference between paratartrate and tartrate of soda and ammonia, the two bodies being precisely the same in every particular, except that one acted on light in a manner different from the other. Pasteur attacked this problem and effected its perfect solution, by showing that there is a tartrate with left hand and another with right-hand crystals, the neutral salt arising from the union of the two. This first step in the seemingly sterile domain of inorganic matter, of molecular physics, led to the two greatest discoveries of his life, whose full unfolding may require another century of ingenious and industrious labor. These discoveries were—first, the nature of fermentation; and second, the transforming of the malignant virus of zymotic diseases into benignant vaccine virus.

He has established the doctrine that fermentation or putrefaction is probably in all cases due to the action of minute living organisms: and that the substances usually regarded as ferments are the food for these organisms—that fermentation is a process of nutrition. The general name of these minute beings is microbes. The name is good, as it implies no theory as to whether these little creatures are vegetable or animal, or neither, in their nature. It would take 200,000 of these microbes, placed side by side, to make an inch. Under the highest powers of the microscope, such specks are hardly discernible. Nevertheless, particles of this size are massive, when compared to physical molecules, each molecule being an aggregation of atoms; whence there is no reason to doubt that each microbe, small as it is, may have a molecular structure sufficiently complex to give rise to the phenomena of life.

The new doctrine, that *fermentation is due to microbes*, is simply a phenomenon of nutrition, served to explain the whole process of the manufacture of vinegar, which is an extensive industry in France. The true and only ferment of vinegar is a microscopic and microbic fungus or mold, and of all plants it is one of the simplest and most minute, and has been known from time immemorial under the name of flower of vinegar. By Pasteur's scientific aid, this industry of *vinegar manufacture* was relieved of its troubles, and placed on an intelligent, secure, and profitable basis. In like manner he pointed out the diseases of wine, due to

microscopic vegetations, and provided the simple remedy. On the same theory he attacked and remedied "the diseases of beer." On this theory he manufactured sweet wine, and pointed out the conditions for making and keeping it sweet and free from fermentation.

Prevention of Chicken Cholera.—In Europe and America, chickens are subject to chicken cholera. Various professional parties supposed this disease due to a microscopic organism or microbe; but Pasteur unveiled its secret. So completely did he master the case that he prescribed a perfect remedy, that allows every farmer to banish this pest from his barn-yard. The only means of arresting the contagion is to isolate, for a few days only, the fowls and chickens; to remove the dung-heaps, to wash the yard thoroughly, especially with water acidulated with a little sulphuric acid, or carbolized water with two grammes of acid to the litre. These liquids readily destroy the microbe, or at least suspend its development. Thus all causes of contagion disappear, because, during their isolation, the animals already smitten die. The action of the disease is very rapid.

Two things connected with the conquest claim special attention, on account of their radical importance—one, the method of identifying and individualizing the chicken cholera microbe, and the other the conversion of the malignant into a benignant microbe. Pasteur took what he supposed to be the deadly microbe from the fowl, and devised a way of cultivating it in an artificial medium. An infusion of the muscle of the chickens was found most favorable. By sterilizing this infusion with potash and heat, and then putting it into this microbe, thus freed from mixture and confusion with other organisms, in a few hours the clear infusion began to grow turbid from the new birth of microbes, and a fowl inoculated with a thousandth part of a drop of it was seized by the disease and died. By passing from one prepared infusion to another, and simply transferring the least possible quantity—only so much of the last fluid as the point of a needle would carry—the new proliferation would in like manner be shown by turbidness; and after a thousand successive cultivations, its malignity would not be lessened or altered. The fact that the last in these successive steps of reproduction produced by inoculation of the same minute quantity, the same disease and death as the first parental organism in the series, certainly identified the microbe as the true and sole author of the disease. But it was, curiously enough, noticed that between no two of these successive

cultivations must more than twenty-four hours intervene, or the virulence would be modified. This fact was full of meaning. This modification of attenuation of the contagium, or virus, generally corresponded with the duration of the interval. If any number of birds were inoculated from any given culture or crop of microbes, within twenty-four hours after its production 100 per cent. of them would die; whereas, if the culture were allowed to remain three months hermetically sealed, or only exposed to pure air, then its inoculation would cause some illness in the fowls operated on, but no death would occur, and in a few days all would recover. To complete the proof, it was found that, if after recovery, the fowls were inoculated with the fresh, deadly virus, it would occasion some illness, but no death.

Here, then, is a poisonous microscopic parasite, cultivated in the laboratory, outside of the body of any animal, and, by a simple mode of handling, converted into its own antidote. The malignant virus, in a word, is rendered benignant. Moreover, this attenuated virus may be cultivated without reversion to its malignity; or it may be made to revert. Its mild nature may be caused to remain unchanged, however, and then it retains its beneficent power of protecting against the ravages of its own kind in their original and savage state. Their deadly fangs are extracted.

Splenic Fever Mitigated.—But was it possible to control the virus of other deadly diseases? It remained for Pasteur to decide this question. February 28, 1881, in his 59th year, thirteen years after his stroke of paralysis, and the second year after entering on the investigation by government appointment, he communicated to the Academy of Sciences his great discovery that the deadly splenic fever virus could be cultivated in the laboratory, outside of the animal body, and mitigated into a prophylactic vaccine virus.

Hydrophobia.—Six years since, M. Pasteur began to wrestle with hydrophobia. Soon a microbe virus was discovered in the saliva of a rabid victim, which was easily cultivatable, but it failed to establish its exclusive claim as the specific cause of the disease. Instead of saliva being used, it was found most effective to inoculate into the circulation, by a vein, the nervous matter of a rabid animal. Usually the brain-pulp is used, and the mitigation is effected by its passage through certain living organisms, as was discovered to be practicable with the hog-cholera microbe. The rabies' microbe is as yet conjectural, as it has not been isolated so as to certainly secure its cultivation outside of the animal or-

ganism. Hence this particular case has not been brought fully up to the scientific standard. Yet public impatience has forced a practice which has lost only about one per cent. out of over six hundred cases; and certainly, with such a practical record, the theoretic aspect is about as hopeful as that of small-pox. It will require much time to mature and perfect the methods so auspiciously and brilliantly inaugurated.

Professor Tyndall uses the following language in his introduction to the *Life of Pasteur*: "Never before, during the long period of its history, did a day like the present dawn upon the science and art of medicine. Indeed, previous to the discoveries of recent times, medicine was not a science, but a collection of empirical rules, dependent for their interpretation and application upon the sagacity of the physician."

Professor Laws concluded his lecture with the following paragraph: "There seems to be ground for concluding that the injunction of Chomel, not so much to treat disease as patients affected with disease, is losing its axiomatic force. Therapeutics is becoming realistic rather than personal. The history of diseases, according to Dr. B. W. Richardson, shows a gloomy catalogue of two hundred and fifty of them, as to which, 'throughout the whole period of human existence on earth, not one new disease has been added, not one withdrawn.' The practice has been honorably pursued through the centuries from Esculapius to Austin Flint; and yet, within a present lifetime, by one of the most able and distinguished professors of the oldest medical school on the American continent, this startling, but not unparalleled language, was deliberately used, in an address to a graduating class: 'Let the declaration go forth with all the authority which can be given to it, by the combined influence of the whole medical profession, that there is no cure for any disease; no single remedy, no happy combination of remedies for any disease which has ever affected humanity.' This grave utterance was put forth April 6, 1850. Could it be repeated in 1886? 'More light—Mehr licht!' were the last words of the immortal Goethe, uttered a little more than fifty years ago, as he ordered a servant to open the blinds of his chamber window. The discoveries of this wonderful age are solving and voicing the riddles of the past.

Missouri University has established a laboratory for the prosecution of these new methods, having given the accomplished veterinarian in charge thereof ample leave of absence

to pursue the study in France, where he is now, with such testimonials as will secure him the most favorable advantages; and also in having established in the University Medical School a course of comparative study, crowned with the degree of M. C. D., or Doctor of Comparative Medicine.

Diagnostic Value of the Knee-Phenomenon, or the Patellar-Tendon-Reflex in Diseases of the Nervous System.

Dr. Phillip Zenner, of Cincinnati, Ohio, said: this phenomenon has been known to the profession since the simultaneous publications of Erb and Westphal in 1875. Its clinical significance is (pointed out by Westphal) that it is present in health and absent in locomotor ataxia, usually disappearing at the very commencement of the disease. It may also be absent in anterior poliomyelitis and neuritis, when the lumbar portion of the spinal cord or its nerves are the seat of disease. It is also absent in many cases of diabetes melitus, and is sometimes temporarily abolished in chronic alcoholism, and after attacks of diphtheria. Various examinations have been made to determine whether it is absent in health. Berger missed it in 22 out of 1,409 healthy men; Eulenberg in 4.8 per cent. of healthy adults and 5 per cent. of children; Bloch in 5 out of 694 school children; Polizans in 2,404 school children, at first missed it in 6, but finally obtained it in every one; Jendaisik examined 1,000 persons chiefly adults, not suffering with nervous diseases and elicited the phenomenon in all but one, a case of diabetes mellitus. Dr. Zenner's observations had embraced the examination of 2,106 persons, all adults, chiefly males. Of these 1,174 were inmates of insane asylums; the others, excepting 106 in the city hospital, were mostly in apparent health. Of this number the knee phenomenon was abolished in 28, of whom 5 had fully developed locomotor ataxia, 12 were in the earlier stages of the same disease, while 11 manifested no other symptom of disease of the cord.

The cases of insanity were treated of separately, because Westphal had shown that, in such cases, the absence of this phenomenon, even when there are no other symptoms, is strong presumptive evidence of disease of the posterior columns of the cord, and because of its special value in diagnosing the form of insanity. Of the 28 cases of insanity with abolished knee phenomenon, 10 were cases of general paralysis, and in 2 it was doubtful whether there was general paralysis or not, notwithstanding the fact that there were at

that time very few cases of general paralysis in the asylum. In many cases of general paralysis and locomotor ataxia we have reflexing rigidity of the pupils; they do not respond to light. In 4,000 insane, 492 had rigidity of the pupils, eighty-five per cent. of whom had general paralysis. Nine out of ten of the essayist's cases of general paralysis had pupil symptoms—one out of the two doubtful cases, and only two out of the eleven other cases. Absence of knee phenomenon and presence of refractory rigidity of the pupils are of great assistance in diagnosing obscure cases.

In 932 sane persons the knee phenomenon was found in 5. The fact that the phenomenon in other pathological conditions does not lessen its significance in locomotor ataxia, for the other conditions can be easily differentiated. It is not so often absent in diabetes mellitus as some believe. Rosenstein missed it in 6 out of 9 cases and Bouchard in 19 out of 66; the author found it in all. It is not often present in chronic alcoholism. Strychnia restores it in chronic alcoholism, but does not in locomotor ataxia.

Method of eliciting the knee jerk. After careless examinations it is often said to be absent when it can be readily elicited. The ordinary method will answer in most cases. Should it fail, the person should sit upon a table, with the legs dangling and the knees entirely exposed, and the ligament be struck in every part. In a small number there will still be failure by this method. For such cases Jendrassik has pointed out another method. The patient is seated as above, and, while the examiner strikes upon the ligaments, he is requested to link the bent fingers with one another, and pull as hard as he can. This augments the muscular tonus and the response increases. This method has enabled the author to find it in a number of cases which did not respond before. So great was the difference that the author thought he might find it in some cases of locomotor ataxia, but failed. In some of his cases the response, though present, was so slight that it might be pathological.

Is the phenomenon always absent in locomotor ataxia? Westphal says yes, in typical cases, but present whenever the disease affects the posterior columns in the lumbar region, which occurs usually at an early period. Later writers have reported cases with post-mortems where it was present. This, however, is so rare as to be of little significance. The essayist had never seen it absent but once, and in this case the appearance was rather that of a diffuse myelitis than of a systemic disease of the cord. He had a

number of cases under observation where the phenomenon was abolished on one side and difficult to elicit, but these were all still in the earlier stages of the disease.

Some Practical Observations on the Results of Medical Treatment in the Charity Hospital at New Orleans, during Sixteen Years, 1869-86.

Dr. Joseph Jones, of New Orleans, La., read a report of his observations during the period specified. It referred largely to malarial fever and its treatment:

Uses of Potassium Chloride

Was the subject of a paper by Dr. A. F. Potter, of Boston, Mass. Nothnagel and Rossbach, in their treatise on *Materia Medica*, say that, therapeutically, potassium chloride is not used. No mention of its use is in the *United States Dispensatory*. Sanders recommended it in epilepsy in place of the potassium bromide. Opinions vary as to its use in that disease, but it has its place. Potassium chloride closely resembles common salt in appearance. Formerly it was generally considered that the corresponding salts of potassium and sodium had the same physiological and therapeutical action upon the animal body; and that it was a matter of indifference which salt was used. Important and well-defined distinctions do exist in the two salts. The potassium chloride in the body is found in the tissues, cells and blood corpuscles, while in the fluids (the serum of the blood, lymph and bile) we find almost exclusively sodium chloride. Arterial blood mixed with a dilute solution of potassium chloride becomes brighter than that mixed with a solution of sodium chloride. Potassium chloride in twenty-grain doses instead of sodium chloride three times a day after meals causes an increase in the muscular tissues and red blood corpuscles. He had used potassium chloride in many cases of anæmia after other remedies had failed. In cirrhosis of the liver, in commencing stage, due to alcoholic excesses, it has been found useful. Exudations after inflammation with effusion of lymph, particularly pelvic cellulitis, have quickly disappeared under its use. In glandular enlargements it is also useful. In stomatitis of pregnant women or from mercury it is equal in effect to the chlorate. In ovarian neuralgia and menstrual headache accompanied with wakefulness, this salt has given better results than the bromide or ammonium chloride. When combined with corrosive sublimate it is one of the best preparations for syphilis in use.

The tinctura ferri chloridi is much improved in its therapeutic action when given with potassium chloride.

Clinical Aspects of Renal Cancer.

Dr. John A. Ochterlony, of Louisville, Ky., referred to the great rarity of the disease, stating that Roberts had only encountered four cases in his experience. The difficulty in diagnosing renal cancer was dwelt upon and the varying character of the clinical history, showing little similarity in any two given cases. Pain was not constant. Hæmaturia was perhaps present in a greater number of cases than any other given symptom. It may be congenital from the reports given of one or two cases in which the disease occurred in children about twelve or thirteen months of age. Calculus had also been associated as a cause, and from its irritation was most probably an exciting cause.

The doctor pointed to the possible complication with floating kidney. External violence was a cause. It was apparently so in one of his own cases. Great variations exist in the time of development. Heredity was *barely possible* as a cause, inasmuch as only a single case could be found in which it was likely. The disease predominates largely in males. Renal cancer may end fatally, without giving evidence of renal disease or without the slightest appreciable tumor. Hæmaturia may be so profuse as to endanger life, or so slight as to require the microscope to detect it. The tumors sometime reach huge proportions—Roberts having reported a case in which the tumor weighed twenty-five pounds. In the author's experience the temperature was constantly more or less elevated, although cases occur in which the temperature was below normal. Anæmia is extreme, the patient dying from asthenia as a rule. The pressure upon the ileum sometimes produces constant nausea, but vomiting was exceedingly rare. Ascites was a very rare complication, but it did occur and was present in one of his cases. Peritonitis was also recognized by some observers. The diagnosis, for apparent reasons, was often impossible before death. The differential diagnosis between cancer of the stomach, tumors of the spleen, etc., was noticed.

The *treatment*, so far as therapeutics go, is essentially palliative; but surgery had achieved some brilliant, if not permanent, victories in this rare and interesting disease.

THIRD DAY—THURSDAY, MAY 6TH.

Pneumatic Differentiation, with Demonstrations with the Pneumatic Cabinet.

Dr. Herbert F. Williams, of New York city, explained the working of the upright metal cabinet, with glass front, and no end of levers, pulleys, rubber-tubing, etc., which he had on the stage. It is of sufficient size for a patient to sit or recline in. On the top is a bellows, or pump, worked with a lever, by which air can be either rarified or compressed, or alternately compressed and rarified, as in breathing, at pleasure. In front is a projection, upon which is placed an ordinary spraying apparatus, which impregnates the respiring air. The door is a wonderful piece of mechanism, fitted with lever and bolts on every side, by means of which it can be readily opened and closed, and may be made absolutely air-tight. The trouble in lung diseases is an ulcerating process going on in an inaccessible portion of the body. For this reason it has formerly been impossible to get medicine to the affected part. By means of this apparatus the lungs are inflated with air, which has been charged with any appropriate remedy. The act of forced expiration compresses the air in the lungs and condenses the vapor on the diseased pulmonary surfaces. The calisthenic effect of artificial respiration thus produced is of great benefit. Numerous experiments illustrative of the method, were given, among which was an experiment with the lungs of a calf, which were made to simulate the expansion which takes place in the lungs of the patient. The operator, by alternately compressing and rarifying the air in the cabinet about the lungs, compels them to breathe as in life. Afterwards they were subjected to a spray for a few minutes, and when cut up and passed among the delegates, exhibited pigmentation in all parts from the color used in the spray. This was used to illustrate the power of the process to penetrate the utmost recesses of the lungs. Dr. Williams presented statistics drawn from his practice, and that of numerous physicians throughout the country, showing that the cabinet had been uniformly successful in the treatment of incipient pulmonary disorders, and had effected recovery in some instances of advanced consumption, where other methods would have failed. He presented a review of professional publications upon the subject, and described the method by which the cabinet was preserved from the hands of unworthy practitioners. An Advisory Committee of physicians, residing in various parts

of the country, are entrusted with the duty of accepting, or rejecting, all applications for the use of the process. Professor Alfred L. Loomis, of New York, is Chairman of this Committee.

Dr. Wright, Chicago, criticised the cabinet and its application. While admitting that it was a scientific advance in medical appliances, he expressed a doubt, founded on experience, as to its universal efficacy.

Dr. Whitaker, of Cincinnati, Ohio, said that he had gone the rounds of the appliances designed for the treatment of the lungs by inhalation, and his garret was full of discarded apparatuses, which had cost his patients a fortune. The pneumatic cabinet was the only satisfactory instrument he had found. It undoubtedly conveyed medicinal spray to the remotest part of the lungs. He mentioned numerous classes of diseases which had been recovered by its use in his practice; and closed by saying, I have become an enthusiastic adherent of the pneumatic process, and would rather part with any instrument in my office than my pneumatic cabinet. He did not say it was a cure for consumption, but he thought that was rather the fault of physicians and chemists, who had no more discovered a means of destroying tuberculosis internally than they had of killing trichinæ in the muscles. He had not found it of great use in asthma cases; and, generally speaking, he thought it more efficacious in preventing disease and checking it in its early stages than curing it.

Etiology of Dengue.

Dr. J. W. McLaughlin, Texas, said the epidemic which prevailed throughout Texas during the fall of 1885 was unusual—first, in its universality; second, in the violence of its symptoms; third, in its manifest contagiousness; fourth, in its protracted convalescence of its subjects; fifth, in its hæmorrhagic tendencies; and sixth, in its numerous sequelæ. Many cases, where direct contagion was the cause, came under his observation. By this means it was spread from one neighborhood to another, and from the city to the country, by infected individuals. The clinical history of dengue, and its epidemic character, shows that it is a specific disease, that micro-organisms are its infection, and that these micro-organisms find in the blood a suitable environment for growth and multiplication. The following investigations were made: First, blood was obtained from living subjects during the various stages of dengue, and micro-

scopically examined directly—*i. e.*, without the addition of chemical re-agents; second, after treatment with such agents—*viz.*, glacial acetic acid, with and without dilution, caustic potash in strong and weak solutions, chloroform, and ether; third, the blood was dried upon sterilized cover-glasses, and subjected to the action of various staining agents; fourth, dengue-blood, obtained from living subjects, was introduced into test-tubes containing sterilized culture-media prepared for this purpose; these were closed with sterilized cotton-plugs, and kept at 100°F., for the growth and multiplication of those organisms which were contained in the blood; fifth, blood was drawn directly from the veins of a dengue subject into a series of sterilized glass bulbs, united by a capillary glass tube—done in such a manner as to guard against the introduction of foreign germs; the series of bulbs were then put into an incubator, and kept at 100°F.; sixth, the matter vomited and urine passed by dengue subjects were microscopically examined, with the following results: In the blood examined, directly or after treatment with the chemical agents named, stained or unstained, he found, often in great numbers, in the cell elements as well as in the plasma, micrococci, syherical in shape and red or pinkish in color, often surrounded by gelatinous capsules. He always succeeded in growing in culture-tubes, upon the surface of the jelly, micrococci, and no other form of bacteria, which in size, color, shape, and behavior, are identical with those seed in fresh dengue blood. The blood contained in the series of glass bulbs was examined, the first bulb at the expiration of six weeks, the other after three months. He found the blood to contain a pure culture of micrococci, which in all respects were identical with those previously found in fresh blood and grown upon culture-jelly. These organisms were also seen in the matters vomited in malignant cases of dengue characterized by much gastric catarrh, and also in the urine passed. In a very few cases he found this to contain casts of the uriniferous tubes, composed of these organisms, held together by their gelatinous envelopes, at the end of these casts, where they were less firmly attached or cemented together. The shape, size and color of the micro-organisms were found to correspond with those in the blood or grown upon the jelly. The blood used in examinations was from different individuals at different times and places, and during the various stages of dengue. If spherical bodies, uniform in size, shape, color, and behavior, are found in the blood in certain pathological conditions, and these

bodies can resist the destructive action of glacial acetic acid, caustic potash, chloroform, and ether, these must be micrococci, in as much as all the blood-cells and granules are destroyed by the chemicals.

Sterilized cover-glasses upon which dengue blood had been dried were subjected to the action of many aniline dyes, to obtain, if possible, one for which these micrococci have an elective affinity. After many failures, he succeeded in staining the organisms with methyl blue in a solution of caustic potash, in a permanent manner. These micro-organisms were uniformly found in the blood of about forty cases of dengue, the number from which blood was obtained. In every instance, tubes inoculated showed, upon the surface of the jelly at the point of inoculation a white spot elevated above the surface. A small amount of this, under a high power, showed invariably a pure culture of micrococci, in every respect identical with those found in dengue blood. The uniformity of these results in growing pure cultures of dengue micrococci certainly indicates that the matter of inoculation came from a common source—*i. e.*, the blood.

The Section adjourned *sine die*.

OBSTETRICS AND DISEASES OF WOMEN.

FIRST DAY—*Tuesday, May 4th.*—Dr. C. S. Gordon, of Portland, Me., Chairman; Dr. J. F. Paine, Galveston, Texas, Secretary.

Treatment of Membranes in Abortion and Labor.

Dr. William H. Wathen, of Louisville, Ky., first remarked upon the division of opinion as to the best mode of treating the membranes—the expectant and non-expectant. The treatment has to be considered as to three of the periods of pregnancy—the first being the first two months; the second, from the second to the seventh months; and from then to full term.

The formation of the placenta begins about the second month, and it increases in size until the end of pregnancy; but in the latter months the union between the placenta and uterus becomes less intimate. The amniou and chorion are not in direct contact until between the end of the third and the end of the fifth month—a fact explanatory of the phenomenon of expulsion of the fœtus in an unbroken amniotic

sac, with retention of the chorion and decidua within the *cavum uteri*. In abortions after the eighth week, in premature labor, and in labor at term, the membranes should be removed, whether separated or adherent, when they are not expelled within twenty or thirty minutes; and they should be removed sooner if there is apprehension of hæmorrhage, retention of the placenta, or irregular contractions of the uterus. If, in abortion, the woman shows symptoms of exhaustion or syncope, and bleeding continues, the shock in removing the membranes is not greater than that of tamponing the vagina. A lady in Louisville died recently from septicaemia with pelvic peritonitis and cellulitis, caused by a decomposed placenta, which had been retained over two months, in an abortion at the end of the third month.

In abortions before the end of the second month, if hæmorrhage ceases, no effort should be made to remove the membranes, unless they protrude into the vagina, and can be taken away without introducing the fingers or instrument into the uterus. For dilatation of the cervix, the finger is the best instrument, although it may be necessary occasionally to use a metallic dilator. Credè's method should be employed in effecting expulsion of the placenta in labor at term. Ergot should never be given until the uterine cavity is evacuated.

Dr. W. P. Fuller, of Maine, was in favor of prompt placental delivery. He is usually able to express the placenta, in cases of labor at term, within five minutes after the expulsion of the child. In abortions, the time required to effect the evacuation is longer.

Dr. Willis P. King, of Sedalia, Mo., had seen 719 cases of labor at term, and twice that number of abortions. In labor at term he employed Credè's method of expression. In abortions, when hæmorrhage was severe, he practiced rapid dilatation of the cervix with the finger or steel dilators. The uterine cavity was then washed out with a hot (115°-120°) solution of corrosive sublimate (1:4000). For tampons, he uses borated absorbent cotton. In normal labor, at term, with no lacerations of the genital tract, intra-uterine irrigation was contra-indicated. As the result of (1) early removal of the foetal envelopes, and (2) the prevention of a culture field for germs, he had seen no cases of septic infection in his practice for over two years.

Dr. C. R. Reed, of Middleport, Ohio, believed in prompt delivery of the placenta in labor at term. In nineteen cases out of twenty, he was able to deliver the placenta by a com-

bination of Credè's methods and traction on the cord, within five minutes after the expulsion of the child.

Dr. W. W. Potter, of Buffalo, said the terms uterine massage and Credè's method had been employed by certain debaters as synonymous. Suprapubic pressure was not Credè's method. Credè, in 1853, said that four fingers must be introduced behind the *corpus uteri*, the thumb over the anterior wall, and the placenta must be expressed just as the stone of a cherry is pinched out. He did not approve of traction on the cord, although when the traction is slight, no harm usually results. He called attention to the importance of effecting early evacuation of the *cavum uteri*.

Dr. John Morris, of Baltimore, never allowed the placenta to remain longer than twenty minutes after the birth of the child. He distinguished between abortions, the result of natural processes, and those induced by medicines and instruments. In induced abortions, it is necessary to practice rigid antisepsis, and the prognosis is less favorable. In "natural" abortion, he was inclined to watch and wait for spontaneous evacuation. Antiseptics are seldom required under these conditions. Certainly, intra-uterine irrigation is not indicated. He never exhibited ergot before the uterine cavity was emptied, except in cases of "bleeders."

Dr. Hunter, of Minneapolis, entered a protest against the indiscriminate use of intra-uterine irrigation. He had recently observed the fatal termination of a case. He swabs out the *cavum uteri*—when indicated—with a mixture of iodoform, carbolic acid, and glycerine. He had seen disastrous results follow vaginal irrigation with a corrosive sublimate solution, 1:2000. Employ the bichloride of mercury with extreme caution—if at all.

Lesions of the Perineum, and Their Repair.

Dr. Henry O. Marcy, of Boston, Mass., read a very instructive paper on this subject, which he illustrated with some two dozen large stereopticon views. He said that when the *rupture is incomplete*, it does not involve the sphincter; with the structures rendered tense by two fingers in the rectum, the tissues are very carefully separated subcutaneously, lifting up to a considerable depth the vaginal mucous membrane with a layer of sub-structures, as widely as may be necessary to restore the parts to their normal condition. This is determined upon before the operation. The anterior flap, cut without opening into the vagina, is then lifted, and the structures are approximated by pins in-

troduced parallel with the rectum, and so fixed in their peculiar construction that they look not unlike a safety-pin in two parts, and thus hold the tissues enclosed without strain. Two or more are introduced in this manner, and the external wound now reversed, until its edges are antero-posterior instead of transverse, and are carefully approximated by the over-and-over tendon suture. The pins are removed in from six to ten days. In *complete suture* the operation varies only in the lateral dissection of the parts, which are then closed by three lines of continuous tendon suture, commencing upon the rectal side, where they are a little deeper, and then on the vaginal side last of all, closing, as in the operation for the restoration of the incomplete rupture, the perineal or external side of the triangle. These reversed surfaces are then held in apposition by the parallel pins, and thus adjusted without strain; the peritoneum is restored to its normal depth and strength. He advises the emptying of the rectum as early as the second or third day after the operation, and never allows an accumulation of fæces to press upon and interfere with repair.

Dr. Gehrung, of St. Louis, praised Dr. Marcy's modified pin suture. He never employed the circular silver suture.

Dr. S. C. Gordon, of Maine, uses the continuous catgut suture, except in lacerations extending into the anus.

Dr. Wathen thought Dr. Marcy's operation better than Dr. Emmet's. The latter is difficult to understand.

Dr. Marcy said his "modified pin" gives less pain than the ordinary silver wire suture. He exhibited ligatures prepared from kangaroo's tail, and treated with chromic acid after Lister's method. He had introduced this ligature. He had tried ligatures made from tendon of the South Carolina fox squirrel with success, and was thus led to send to Australia for the tendon of the kangaroo's tail. These ligatures were kept in bottles two feet long.

Pathology of Erosion, so-called, of the Os Uteri.

Dr. E. W. Cushing, of Boston, Mass., stated that the customary divisions of erosions is erroneous; the views advanced by Ruge and Veit are essentially correct. Exception was taken to the views of Emmet as to the relative importance of lacerations in causing the eversion in ectropion. The granular formation in the mucous membrane is the immediate cause both of the symptoms and the eversion, and the condition spreads far over the cervical tissues, which should be covered by flat epithelium. He advised, in gene-

ral, that erosions, when not yielding readily to medical local treatment, be freely curetted, or, if inveterate and recurrent, be thoroughly excised.

Dr. A. C. Miller thought the pathological conditions of the cervix described were referable to the blood-vessels of the part. The veins were frequently varicose. He had effected cures by putting a small rubber band around the neck, near the vaginal insertion. These pathological states of the cervix are examples of malnutrition.

Some Observations on the Uterine Sound, with Especial Reference to its Use in Gynæcology and Therapeutics.

Dr. W. W. Potter, of Buffalo, N. Y., called attention to the ancient armamentarium of the gynæcologist. The sound is still retained, and is of use in clearing up doubtful points in diagnosis. The opinion of many is that the irritation made by the sound has often been the cause of great damage. His experience has been that it should be very carefully used, and only in well-defined conditions. Of late years he has not used it often. He had seen inflammation of all the pelvic organs follow its use. That abortions are caused by injudicious and unguarded use of the sound, is notorious, and is an argument against indiscriminate use of the instrument. It is impossible to get a correct idea of the condition of the pelvic organs thus alone. The sound is nothing less nor more than a prolonged finger, and should, therefore, be dispensed with wherever the finger itself can be made available, provided it furnishes with accuracy the information sought. It should never be used with any force, its own weight being sufficient to carry it to any place where it can be of service. The os uteri should always be patulous whenever it is employed, and the endometrium should be free from undue tenderness when touched by the sound. The delicate virgin silver wire probe of Sims is safer than Simpson's sound. This should not be passed until one has become quite familiar with all the peculiarities of the sexual tract of his patient; nor until it is first wrapped with a film of absorbent cotton, to serve as a cushion to the metal. It should never be used as a repositor. Manipulation in the genu-pectoral position will effect reduction of dislocation, when such rectification of position is indicated.

Dr. Geo. F. Hulbert, of St. Louis, thought it impossible to acquire adequate knowledge of the pathological conditions of the uterus without the use of the sound.

Dr. Engelmann, of St. Louis, had given up the use of the sound, and, to a degree, that of the speculum.

Dr. Gehrung, of St. Louis, thought the sound should never be used as a uterine repositor when adhesions exist. When the uterus is perfectly movable, and absolutely no adhesions are present, the uterus may be replaced by a repositor. He thought the film of cotton placed around the sound a dangerous precaution; fluids may be forced through the tubes on account of the plugging of the cervical canal. The *tactus eruditus* must be acquired before the sound can be dispensed with. In the diagnosis of cervical lacerations, etc., he gained more information by means of his index finger than by the speculum.

Dr. A. C. Miller, of Ohio, opposed the views advocated by Dr. Potter. Digital examination was the cause of cellulitis, as well as the sound. In the hands of an expert, the sound is a perfectly safe instrument.

Dr. King thought the inflammatory disturbances, ascribed to the sound, were frequently of septic origin. Germs from the vagina were introduced along with the instrument. Cleanse the vagina thoroughly before introducing the sound. Latent vaginal gonorrhœa is a frequent condition, and the gonococci cause the mischief attributed to the sound.

SECOND DAY—Wednesday, May 5th.

Electrolysis in Gynæcology.

Dr. Franklin H. Martin, of Chicago, Ill., had used electrolysis with beneficial results in the following conditions: Chronic cellulitis and peritonitis, chronic ovaritis and salpingitis, chronic subinvolution of the uterus, chronic hyperplasia of the uterus, uterine stenosis, laceration of the cervix (removing cicatricial tissue), ovarian cysts, periuterine hæmatocele, uterine fibroids. It is the chemical effect of the galvanic current he sought. He seeks to remove pathological tissue by breaking it up into its constituent elements, when absorption is accomplished or facilitated. There is a tendency to electrolytic action in all tissues through which a galvanic current of high tension is passed, but it is not so active in normal as in pathological tissues. Normal tissue tends to repair itself immediately, and to replace that which might have been absorbed by the effect of the electrical current. Pathological tissue, as a rule, has not this power. The current he uses is one of small quantity and high tension. He used a small Bunsen element of zinc and carbon. As a fluid, he uses a weak solution of sulphuric acid and bichromate of potassium. In applying a galvanic current.

for the purpose of permitting the absorption of an inflammatory exudate, or a pathological growth of any kind, he seeks to pass the current through the centre of the largest mass of such tissue.

Dr. Ely van de Warker, of Syracuse, N. Y., had used electrolysis in a case of rapidly growing uterine fibroid. The patient was young, married for three years. The tumor extended to the umbilicus. No menorrhagia. The patient was anæsthetized, two needles were inserted into the tumor, and ten, fifteen and twenty zinc carbon cells were employed. The treatment, notwithstanding the narcosis, was painful. A high temperature was noted about three days subsequently, caused by the formation of an abscess. This abscess subsequently ruptured. The patient returned at the expiration of three months, and electrolysis with twenty cells, through one-half hour, was practised. Three months ago, no appreciable diminution in the size of the tumor was noticed. A slight reduction in size followed the first treatment, possibly due to the abscess. Negative results were obtained in two other cases of uterine myomata. In his hands, this method of treatment had been painful, and not devoid of danger.

Dr. Robert Newman, of Brooklyn, said that weak currents should be employed to produce resorption. The use of from twenty to eighty cells is criminal. Failure in the treatment with electrolysis is due to—(1) medical men expect too much; (2) they do not know what they are doing. Electrolysis has a wide field of usefulness in gynæcology. Its function in extra-uterine pregnancy is established. He expects much in the treatment of fibroids. Insert one needle into the tumor, and place the other pole on the abdomen. Then, two, three, four, five, but never more than six cells should be employed. Semmel, of Mexico, and Mundé, of New York, had practised with advantage this method. In carcinoma and sarcoma, the growth can be resolved into its chemical constituents; and when the cancer, or sarcoma germs, have not gone beyond the limits of the neoplasms, diseases can be cured. When the germs have invaded the system, resolution of the local disorders has little influence on the diseases. In carcinoma of the mammary gland, he had, in some instances, cured the disease.

Dr. Hulbert, of St. Louis, believed in the potency of electrolysis. Dr. van de Warker had used electrolysis without a galvanometer. As well give strychnia without measuring the dose as use electricity without a galvanometer. He had re-

cently used electrolysis in a case of pelvic abscess. After evacuation of the pus, he washed out the cavity with a boric acid solution, and treated the walls by electrolysis. Complete resolution was effected.

Dr. Engelmann was surprised that gentlemen used electrolysis without a galvanometer. He heartily endorsed the remarks of Dr. Hulbert. The employment of weak currents, he thought, was an error.

Dr. Martin had cured a case of uterine fibroid after forty-five *séances* of forty minutes duration. Dr. Engelmann cured such cases after five *séances* of five minutes duration, without anæsthesia. The negative pole was introduced within the tumor six or seven inches, and then a current of from forty to one hundred *milleampères* was employed for five minutes. A soft sheet of pliable metal, covered with a sort of punk, was placed over the abdomen and connected the positive pole.

Puerperal Fever, and the Early Employment of Antiseptic Vaginal Irrigations,

Was the subject of a paper by Dr. E. Gustave Zenke, of Cincinnati, Ohio, which was illustrated by diagrams, and included numerous records of special cases. Washing out the vagina immediately after normal labor, he thought meddlesome midwifery—it did no benefit, prevented nothing, and might do harm. In prolonged or instrumental labor, if the hand has been introduced, or if injuries have been sustained, vaginal injections are always, uterine injections rarely, indicated.

Dr. Hulbert, when he took charge of the Female Hospital, met with an epidemic of puerperal fever, with a mortality of twenty-five per cent. Fifty per cent. of all the cases suffered from septicæmia. During the last year, with antiseptic vaginal douches in all cases, and intra-uterine irrigation when specially indicated, the mortality from puerperal fever was three fourths of one per cent.

Dr. King thought carbolic acid a poor antiseptic when used in ten per cent. solutions. A five per cent. solution has little influence on micro-organisms. He preferred the bichloride of mercury. Vaginal injections are sometimes dangerous. When the tube is introduced within the vagina, the circular muscular tube may contract, and the fluid may be forced into the *cavum uteri*, through the tube, into the peritoneal cavity. In intra-uterine irrigation, it is necessary to secure an adequate return flow.

Dr. Sargent, of St. Louis, urged the employment of the double catheter for intra-uterine irrigation.

Dr. C. R. Reed narrated the histories of four cases of puerperal fever in primiparæ. Three survived under the opium and quinine treatment; one died. He did not believe in antiseptic midwifery.

Dr. T. A. Reamy entered a protest against the use of vaginal injections in the *puerperia* following strictly abnormal labors.

Dr. W. W. Potter believed in the prophylaxis of puerperal fever. When the temperature reaches 100°F., during the *puerperium*, he becomes suspicious of a retained shred of membrane or decomposed clot of blood, and, in many cases, resorts at once to intra-uterine irrigation with Chamberlain's glass tube.

Early Diagnosis of Pregnancy.

Dr. E. S. McKee, of Cincinnati, said reliable evidence is sadly deficient in the first months. This fact in mind, he turned his attention to the symptoms of the first trimestrium, particularly those of late discovery. First were considered those signs which might occur at the time of conception. A number were mentioned, but the only one thought to be of value was the peculiarly voluptuous sensation and more general erethism experienced on fruitful intercourse. An enumeration of the symptoms of early pregnancy, generally known, was then made. What was true of the first of these—absence of menstruation—was true of them all—viz., there were numerous exceptions to any of them, and the same condition might be produced by other causes. Amongst the latter signs might be mentioned that of Jacquemier, the slate or purple color of the vagina. Anything which impedes the circulation may cause this appearance. Dr. Joseph Taber Johnson thinks the principle of the telephone could be used to hear, much earlier than usual, the feeble sounds of the foetal circulation. Dr. S. C. Dumm thinks he can diagnose pregnancy as early as the fourth week by the odor of the vernix caseosa upon the examining finger. Dr. E. C. Gehrung was able to make the diagnosis by the fifth or sixth week by the sensation imparted on touching the ovum with the sound. This is dangerous practice, while it may be simulated by a polypus or foreign body in the uterine cavity, and in the early weeks the ovum is only attached to parts of the uterine walls, and the sound may glide by. Pinard and Didsbury have treated of a gingivitis which begins about the

second month. Jorrisenne, basing his observations on the law formulated by Graves—that in hypertrophy of the heart the radial pulse remains the same, whatever the position of the body—maintained that instead of the usual variation of from ten to twenty beats in the non-pregnant woman, the pulse of the impregnated remains the same; this symptom is quite unreliable. Dr. H. D. Fry thinks that a rise in temperature in the cervix to one degree or more above the temperature of the axilla is a strong presumptive evidence of impregnation, provided there is no local disease. The author had found this true, but had found the rise of temperature in the vagina to be of less value. To Hegar, of Freiburg, we are indebted to the new sign of great promise. This consists of an unusual resilience, compressibility, softness, boggiess, yielding, and thinning of the lower uterine segment—that is, the section immediately above the insertion of the ligamenta sacro-uterina. The shape assumed is that of a fan, balloon, or jug. The change is most apparent in the median line. According to Compes, the examination should be made as follows: The thumb is introduced into the vagina until it reaches the cervix, and the index into the rectum until it reaches the ligamenta sacro-uterina; the other hand is placed over the abdomen immediately above the symphysis, and pressed toward the finger in the rectum. The rectal finger explores the cervix and the lower uterine segment in all its parts, and lastly, the higher parts of the uterus. The examination is facilitated by pulling down the uterus with the volsella, and evacuating the bladder and rectum. The author thought this mode of examination thorough, yet repulsive to both patient and physician, as well as difficult and hazardous. He thought it quite possible, in the majority of cases, to make out all that is necessary with the finger in one of the culs-de-sac, and the other hand externally. If this is not sufficient, it would be quite proper to make the examination as above described. The bladder distended with urine, and the uterus with menstrual blood, may simulate Hegar's sign. These can be easily differentiated. Hyperplasia would show increased density. Subinvolution would increase the longitudinal as well as the transverse diameters. In marked retroversion a careful examination per rectum is often necessary to find the sign. Dr. Reinl, formerly assistant to Hegar, says: "Among twenty-two cases, I missed this sign but twice, and found it earliest in the fifth week of pregnancy." Dr. Compes, present assistant to Hegar, has reported six cases. Dr. E. H. Grandin,

of New York, reports eighteen cases, and says he can make the diagnosis prior to the eighth week by Hegar's sign alone. The author had a number of cases under observation. One believed herself pregnant. Repeated examinations failed to find Hegar's sign, and she was assured that she was not pregnant. After thirteen weeks, the menses returned, and were normal in amount and duration. A young wife, after a four months' absence from her husband, returned to him February 9th. She came under the author's care, and her case required a digital and specular examination two or three times per week. Three times in the sixth week Hegar's sign was made out. March 31st, forty-eight days after her return, she miscarried.

Dr. J. F. T. Payne, of Texas, reported a remarkable case of congenital absence of the ostium vaginae, and delivery by the anus.

THIRD DAY—Thursday, May 6th.

Pelvic Inflammations and Accumulations.

Dr. Willis P. King, of Sedalia, Mo., said that collections and accumulations within the pelvic cavity of inflammatory origin are serous or purulent. Serous collections are situated high up, and are really examples of encysted peritoneal transudations. In these, the prognosis is less favorable than in circumscribed collections of pus. Pelvic abscesses are usually situated on a lower level near or in the cul-de-sac of Douglas. These he treated by antiseptic incision through the vagina, continuous drainage, and antiseptic packing of the vagina. Sometimes he opened these abscesses by Hilton's method.

Dr. French, of Minneapolis, limits the treatment by aspiration to serous effusions. He recommends divulsion rather than incision, on account of hæmorrhage. He exhibited a self-retaining, horned drainage tube. In a certain class of cases of pelvic abscess, he insufflated the abscess cavity, after the evacuation of pus, with iodoform. He used an insufflator with an aurist's mouthpiece.

Dr. W. W. Potter suggested for continuous drainage the self-retaining catheter of Nélaton.

Dr. Harvey, of Indianapolis, had employed the peroxide of hydrogen in the cleansing of the cavities of pelvic abscesses with benefit. The cessation of effervescence indicates the time when the pus has disappeared. He had now under treatment an abscess with fifteen sinuous tracts communicating with its cavity, which is improving under irrigation with peroxide of hydrogen.

Dr. S. C. Gordon said the use of the sound is the most common cause of pelvic abscesses. Prevention is better than cure. Every case of pelvic cellulitis ought to terminate within seven or eight days. He gives quinine and opium—large doses (no aconite, veratrum viride, or cardiac depressants); stimulants, food, rest; third to fifth day, apply large blister over the lower part of the abdomen. In nine out of ten cases, it is possible by this means to prevent the formation of an abscess. When an abscess does form, it should be immediately evacuated.

Dr. Haggard, of Nashville, said the use of the sound, and the indiscriminate employment of the applicator, are responsible for a large number of these cases.

The discussion on Dr. Zenke's paper was renewed—the general tenor of remarks opposing intra-uterine injections.

Dr. C. R. Reed, of Middleport, Ohio, read a paper on *the imperative necessity of abdominal section, as illustrated by an unusual case of ovariectomy*.

Adjourned *sine die*.

DISEASES OF CHILDREN.

FIRST DAY, *Tuesday, May 4th*.—Dr. W. D. Haggard, of Nashville, Tenn., Chairman; Dr. W. B. Lawrence, Batesville, Secretary.

Non-Identity of Membranous Croup and Diphtheria.

Dr. S. M. Towles, of Columbia, Tenn., spoke of the non-identity of diphtheria and membranous croup, and narrated numerous cases from his record to illustrate the differences between the two diseases.

Treatment of Diphtheria.

Dr. De Laskie Miller of Chicago, Ill., said that in order to know how to treat disease we must first know the nature of that disease, and that presents the question, "Is diphtheria a local disease?" The fascination of certain sciences are liable to bias the mind, and may lead the man astray. The scientist may show that diphtheria is apparently a local disease. But in the outset we find that the disease is characterized by a period of incubation, and the throat affection is a local trouble of a general disease.

But diphtheria is not croup. Diphtheria is infectious;

croup is not. Now, in the management of a case of diphtheria it is important to think of the infectious nature of the disease. Isolate the sick from the well, and remove from the sick-room all carpet, upholstered furniture, and clothing. Then secure perfect ventilation, and maintain in the sick-chamber a uniform temperature of about 72 degrees. Then, when the case is terminated, the bedding should be removed from the house.

In medicating, the first thing to be sought is the destruction of the disease germs in the blood, then the removal of effete material, the appeasing of pain, and the exercise of care to sustain the strength of the patient. The medicine prepared for children should be rendered as palatable as possible.

It is also important that the air in the sick-chamber be kept moist, as the simple inhalation of damp air is a powerful agent of relief. The liberal use of food should not be neglected, and alcoholic stimulants in liberal quantities are valuable.

Dr. Ingalls, of Chicago, exhibited a set of instruments for the treatment of diphtheria, and explained the manner in which they are used.

In the discussion following the reading of these papers,

Dr. W. D. Haggood said he believed in the individuality of piththeria and croup. His treatment of the former was essentially tonic, stimulant, and nutritive, but not too much of either of the last two for fear of over-burdening the kidneys. He believed the disease is originally constitutional, and that the local expression follows the constitutional involvement. He does not think tracheotomy is usually resorted to early enough, and hence its bad record; but he hoped very much that the recent agitation of the intubation practice would be more generally tested, as he thought favorable of the idea, and the reports thus far are encouraging.

Drs. G. S. Franklin, of Chillicothe, Ohio, C. E. Briggs, of St. Louis, and ——— Pierson, of ———, related striking cases supporting Dr. Miller's views. Dr. Pierson spoke strongly of the local use of solutions of chloride of sodium.

Dr. J. N. Love of St. Louis, Mo., favored the theory that a specific germ is the cause of diphtheria. His treatment consists in the use of antiseptics, germicides, broken doses of calomel, and infinitesimal doses ($\frac{1}{100}$ grain) of bichloride of mercury every two hours. He uses no quinine, little iron, and positively no chlorate of potash. He did not

need to see the reports of Von Meering to convince him that chlorate of potash was sometimes dangerous when used internally. As a local application, he very decidedly preferred Listerine, well diluted.

SECOND DAY, *Wednesday, May 5th.*

Heritage of Effeminacy in City Life.

This was the title of a paper prepared by the well-known scientist, Samuel Hough Terry. The writer has made a special study of the sexual relations as they are affected by social life and civilization. He takes the ground that in the large cities of the United States the female children are outnumbering the male, and explains it by saying that the conditions of ease and luxury found in city life favor the birth of girl children and are unfavorable to the birth of boys. Under natural conditions the birth of boys should outnumber those of girls from 7 to 10 per cent., but in cities they do so only seven-tenths of 1 per cent. The same influences which militate against the birth of boys also effeminate those who are born, and make them accessible to disease and death.

Why Diseases of Children Should be Made a Study by Themselves.

Dr. (Mrs.) Mary H. Thompson, of Chicago, Ill., ably portrayed the prevailing ignorance in regard to infantile complaints, and some of the particular ailments which demands special attention were detailed. She stated the four following reasons why children's diseases should constitute a special study: (1) Because of the undeveloped and growing condition of the patient. (2) Because of the difficulty of diagnosing the ill-defined diseases of children under one year of age. (3) Because the remedies used by adults cannot be applied to children. (4) Because by making this a special study the idea will be impressed upon the minds of the laity that the life of a child is worth as much as that of a man. After giving a diagnosis of a case of pleurisy and pneumonia, Mrs. Thompson asked with spirit: "Shall we ever so understand these cases that we shall be able to approach a sick infant without feeling that we are drawing near a mystery we may not solve?" She strongly advocated preliminary study as to the causes of infant diseases; the knowledge of the laws of hygiene was the essential initial stage to successful treatment. It was necessary, for instance, to decide whether there should be baths or no baths; and if

baths, what baths. Should there be exercise, and how much? And what kind of food should be given? Paradoxical as it might sound, children were often starved by what was called "good living," and an intelligent discrimination as to the nature and proportions of food was even more important than a "full diet." Some severe strictures on the use or abuse of certain remedies—notably opium and alcohol—were made. Many children died rather from the remedy applied than the diseases suffered from.

Dr. C. J. Lewis, of Indiana, eulogized the paper and advocated a special training relative to the diseases of children and their cures. He criticised the use of alcohol in any form for children.

D. H. F. Hendricks, who is not a member, but who was allowed to speak out of courtesy, advocated the application of heat in certain complaints.

The discussion was continued by Dr. Swift, of Iowa, and Dr. J. Pittman, of Jacksonville, Ill. Dr. Goodman, of Illinois, said he used little medicine, and A. B. Arnold, of Baltimore, gave his experience with alcohol and opium. Dr. W. S. Stewart said a word for bromide of potassium, and Dr. Littlefield, of Iowa, attacked the alcohol uses, and said there was more virtue in a grain of quinine than in a barrel of alcohol.

Adjourned.

OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY.

FIRST DAY, *Tuesday, May 4th*—Dr. Eugene Smith, Detroit, Mich., Chairman; Dr. J. F. Fulton, St. Paul, Minn., Secretary.

Operations on the Drumhead for Impaired Hearing

Was the subject of a paper by Dr. S. S. Bishop, of Chicago, Ill., in which he detailed fourteen illustrative cases. Even in cases of labyrinthine trouble, he had improved hearing by the use of electricity combined with perforations of the membrana tympani. He made his cut either in the lower anterior quadrant, or even began at the upper anterior quadrant, and went through the lower anterior into the lower posterior quadrant of the drumhead.

Retinoscopy [Shadow-Tests] for the Measurement of Reflection—Its Best Form and Practical Value.

Dr. Edward Jackson, of Philadelphia, Pa., in a paper on this subject, recommends a flat mirror of a diameter of one inch and a half. He thinks it is especially adapted for the detection of astigmatism and, furthermore, in the examination of unruly patients and in nystagmus.

In the discussion the main point elicited was, that retinoscopy is especially adapted to quickly determine the existence or non-existence of astigmatism of high degrees of hypermetropia and myopia combined with astigmatism. The discussion was participated in by Drs. Fryer, of Kansas City; Johnson, and several others.

New Perimeter.

Dr. Leroy Dibble, of St. Louis, Mo., exhibited a new perimeter, the operation of which he explained at length. He did not exactly claim originality for it, yet he offered it as an improvement on Forester's, which it resembles very materially, being, however, lighter and cheaper and having a registering plate.

After a recess for the inspection of the very neat instrument, which costs only \$50 in a proper box, an animated discussion took place upon the merits of the instrument. It seemed to be considered by most of the gentlemen to have peculiar advantages, while others stated that they could hardly see them. It is said to be almost exactly like McHardy's, of London, which was better, however, having a good registering apparatus and a good face rest. With regard to McHardy's instrument, Dr. Dibble stated that it ought to be called Stevens' instrument, since he knew that McHardy had stolen it from Stevens.

The discussion was participated in by Drs. Thompson, of Indianapolis, Coomes, of Louisville, Reynolds of Louisville, Hazen, of Iowa, Alt, of St. Louis, Webster Fox, of Philadelphia.

Dr. Wm. Porter, of St. Louis, Mo., read a paper on *Some Suggestions in the Treatment of Diphtheria*.

Dr. Fletcher Ingals, of Chicago, Ill., reported a very interesting case of *Removal of a Large Pharyngo-Laryngeal Fibroma*. He particularly dwelt upon the value of the wire-snare in similar operations.

Dr. J. J. Chisolm, of Baltimore, Md., stated that since he

had used cat-gut for the similar purpose of removing polyps from the ear, he did not think wire half so useful.

Iridectomy.

By request, Dr. Chisolm spoke on this subject. He stated that he had got a statement from Dr. Michel, of this city, which had startled him, namely: That he did no longer bandage nor confine patients after iridectomy or extraction had been performed, and that his results were better than before. No statistics were brought on to prove the statements. The discussion brought about some rather severe criticisms on such action, and it seemed to be the feeling of the majority that to let well enough alone was wiser.

Exophthalmus with no Appreciable Cause. Dr. J. H. Thompson, of Kansas City, Mo., reported such a case, although the orbit was examined (under ether) with probe and syringe.

Culbertson's Prisoptometer for Detecting Ametropia of All Kinds was exhibited by Dr. Adolph Alt, of St. Louis, Mo. He stated that the few trials he had been able to give the instrument had convinced him of its usefulness, especially with children, and he thought he could recommend it. He further added that the instrument could be bought for \$15 without, and for \$25 with stand of the Geneva Optical Company, Geneva, N. Y. Dr. Alt also read a paper on *Trachoma*.

Successful Transplantation of Rabbit's Conjunctiva into Conjunctival Sac of a Patient for Symblepharon. Dr. Eugene Smith, of Detroit, Mich., reported the case.

MEDICAL SOCIETY OF NORTH CAROLINA.

FIRST DAY—WEDNESDAY, May 19th.

The Society convened in the new Court-House building in the historic town of Newberne, N. C., at 10 A. M., Wednesday, May 19th, 1886. Perfected arrangements had been made for the entertainment of the visitors by the local committee, of which Dr. J. B. Hughes, of Newberne, was chairman.

The President, Dr. Joseph Graham, of Charlotte; the Secretary, Dr. Julian M. Baker, of Tarboro, and the assist-

ant Secretary, Dr. Isaac M. Taylor, of Chapel Hill, besides the Treasurer, Dr. R. L. Payne, Jr., of Lexington, and other officers and members were present.

After prayer by Rev. L. W. Crawford, of the Methodist (South) Church, an elegant and cordial *Address of Welcome* was delivered by Hon. C. C. Clark, which was responded to in happy terms by the President. On motion of Dr. S. S. Satchwell, of Rocky Point, the thanks of the Society were voted Hon. C. C. Clark for his cordial welcome, and the physicians and citizens of Newberne whom he represented.

When the absence of Dr. Thos. F. Wood, of Wilmington, was announced as being due to a very serious illness, on motion of Dr. L. J. Picot, a message of sympathy was ordered to be telegraphed to Dr. Wood.

Dr. S. D. Booth called up resolutions laid over from last year, suggesting (1) that all regular meetings of the Society be in Raleigh; (2) a tax of \$1 upon each member in addition to the regular dues, the total to be set apart as a sinking fund; (3) a committee to invest this money at a good interest, and (4) when a sufficient sum is realized, then erect a building in Raleigh as a depository, medical and surgical museum, and a hall for usual Society meetings.

Dr. J. J. Summerell, of Salisbury, thought the project impracticable. Dr. A. B. Pierce, of Weldon, moved to lay the whole matter on the table. Carried.

President's Address.—Dr. Joseph Graham invited Vice-President L. J. Picot to take the chair, and then proceeded to deliver the Address of the President. He urged the importance of maintaining and strengthening the State Society by organizing County Societies, and recommended that a committee be appointed to examine the constitution and charter of the State Society, to see what changes should be made to promote its interests. A reference of commendation to the work done for the good of the State profession by Dr. Thomas F. Wood, of Wilmington, was heartily applauded. He stated that, during the year, there had been 154 applicants to the State Board of Medical Examiners for license to practice medicine in North Carolina, of whom only 119 passed satisfactory examinations. Four were granted temporary licenses under the law, and thirty-one were rejected as unqualified. This shows that the standard of proficiency of the Examination Board is higher than that of the average medical college. He urged that applicants, before the Board, should receive at least five of the seven votes of the Examiners before receiving license to practice.

During the past year, the first colored physicians in the history of the profession had applied for license to practice, and two of the number had passed successful examinations. But neither of these asked for admission to membership in the State Society—being satisfied with the legal permission to practice medicine in North Carolina. They manifested no aspiration for social recognition.

During the *afternoon session*, Dr. S. S. Satchwell read a paper on *Germ Theory of Diseases*, which was referred to the Publishing Committee.

Dr. W. T. Cheatham, of Henderson, read an interesting paper on *Opium Poisoning treated by Artificial Respiration, etc.* He did not think atropine was to be relied on so implicitly as many writers had impressed upon the professional mind. Referred to the Publishing Committee.

SECOND DAY, *Thursday, May 20th.*

Medical Department of University of North Carolina. Dr. W. R. Wood, from the committee appointed last year to consider the subject of petitioning for such a department in the State University, presented the following resolutions as the report of the minority:

Resolved. That the establishment of a medical department in connection with the State University similar in character and design of the medical department of the University of Virginia is a thing not only practicable, but on every account greatly to be desired.

Resolved. That a committee be appointed by this body to confer with the Trustees to the University of the State, at their meeting in June, in reference to the establishment of such a department in that institution.

Resolved. That this committee be empowered to act conjointly with such committee as the Trustees of the University may think proper to appoint for the purpose of bringing the subject matter of this report properly before the Legislature at its next session.

Dr. C. J. O'Hagan submitted the following as the majority report, signed also by Drs. T. D. Haigh, H. T. Bahnson, and Joseph Graham:

That in their opinion there is no necessity for the addition of a medical department to the State University, and that at present the scheme is utterly impracticable. It is,

furthermore, the opinion of the undersigned that neither the interest of the profession or the public would be advanced by the establishment of such a department; in a word, that the interests of the profession and the public would be more enhanced by the support of a few good schools than the establishment of many bad ones.

Dr. O'Hagan thought there were already too many medical schools in this country. He was in favor of fewer and better ones than we have.

Dr. John McDonald, of Washington, agreed with Dr. O'Hagan that smaller schools would be so inferior to the larger ones that there would be but little encouragement.

Dr. J. D. Roberts, of Goldsboro, thought Dr. McDonald had struck the key note when he asked the question, would we be willing to send our students to these inferior schools when there were so many superior schools?

Dr. A. G. Carr, of Durham, supported the minority report. He wished to be put on record that he was in favor of the establishment of this school, and if the Society would make up its mind to do it, they could soon establish a school at the University that would be a credit to North Carolina.

Dr. Wood cited facts to show the amount of money annually carried out of North Carolina to other medical schools. He was opposed to remaining hewers of wood and drawers of water for other States forever.

Dr. McDonald admired the enthusiasm of Drs. Carr and Wood, but under the circumstances what can we promise ourselves? We are too full of mustard seed and hundred dollar doctors already.

Dr. Hayes favored the minority report and thought he voiced the sentiments of every young man of the Society. He dwelt upon the fact that large sums of money were annually carried out of the State to other medical schools which ought to be used in supporting a home school.

Dr. Geo. W. Graham thought the Society had overlooked the fact that the University was a State institution, and if a school was established there it would be controlled by the State and eventually by politics.

The majority report was adopted.

Prize Essay. Dr. N. J. Pittman, the oldest of the three surviving members of the original Medical Society of North Carolina, offered an annual prize of \$100 for the best original essay on a subject in scientific medicine; the competition to be confined to members of this Society. The prize is to be awarded by a committee who shall have authority to re-

ject all or any essays offered not deemed worthy of a prize.

On motion of Dr. O'Hagan, the offer was accepted by a rising vote.

Drs. Hunter McGuire and Landon B. Edwards, both of Richmond, Va., were introduced as Fraternal Delegates from the Medical Society of Virginia, and were invited to participate in the deliberations of the Society. The courtesy was acknowledged by each of the gentlemen.

Artificial Alimentation was the title of a paper by Dr. R. S. Young, in which he presented the advanced views of the day—especially as they relate to preparations of digestive agents, etc. By invitation, Drs. Edwards and McGuire participated in the discussion which was kept up by Drs. Cheatham, McDonald, Booth, O'Hagan, Hayes, and R. L. Payne, Jr. The paper was referred to the Publishing Committee.

During the conjoint session of the State Board of Health and the Medical Society of North Carolina, Dr. J. W. Jones, of Tarboro, President of the Board of Health, presided.

Good and Dangerous Illuminating Oils. Prof. Simmons, of Wake Forest, Chemist for the State Board of Health, made a brief preliminary report of the work done by him in the way of examining the safety of illuminating oils since his appointment. He gave the following as the results of his testing various samples of oil found on sale by merchants at Wake Forest, the test of flashing point being made by the New York Oil Tester of the New York State Board of Health:

Safety oil, flashing point.....	117° F.
Kerosene oil, " "	90° F.
Red C oil, " "	119° F.
Safety oil, " "	115° F.
Kerosene oil, " "	84° F.
White C oil, " "	118° F.
Kerosene oil, " "	99° F.
Securety oil, " "	124° F.
Kerosene oil, " "	99° F.
Astral oil, " "	118° F.
Security oil, " "	113° F.
Kerosine oil, " "	95° F.

He stated that oil which flashed at less than 110° was considered unsafe.

Dr. Simmons' report was received, and he was given further time to report upon a plan of action to protect the public.

Dr. R. H. Lewis, of Raleigh, read a paper on The Eye, which was intended more particularly for the people than for the profession. At the conclusion of the reading, a motion was adopted to print and circulate twenty thousand copies.

After some discussion on county boards of health the conjoint meeting adjourned.

President Graham resumed the chair, and the Society adjourned 3½ o'clock

During the *Afternoon Session*, Dr. Chas. Duffy, of Newberne, exhibited a patient—a child—who had suffered a severe burn of the foot and leg. In order to overcome the deformity resulting from the cicatrices, he had been compelled to use the knife quite extensively. The case also illustrated how much good could be accomplished by persevering training system of treating muscular contractions.

Dr. Geo. G. Thomas, of Wilmington, was selected as essayist for the next Annual Session.

Drs. H. T. Bahnson, A. B. Pierce and W. D. Hilliard were appointed the committee to whom Dr. Pittman's prize essays are to be committed.

A communication from the Woman's Christian Temperance Union relative to prescribing spirituous liquors for patients was laid on the table. The communication condemned the prescribing of such things. Doctors are deemed to be the best judges in such matters.

Dr. Booth read a paper advocating the *dry method in treating uterine inflammation*, and exhibited an applicator of his own invention. An ordinary insect powder blower suggested the idea to him. A long canula is attached to a rubber syringe bulb, and the powder to be used is blown through it upon the diseased surfaces.

By request, Dr. Hunter McGuire presented his views regarding the use of antiseptics in wounds. He spoke of healthy wounds, and thought thorough cleanliness better than antiseptic sprays in treating them. His ovariectomies and the like had done better when he left off the so-called antiseptics and relied on thorough cleanliness of instruments, hands and surroundings. His remarks were highly applauded. Dr. W. J. Jones, however, thought that antiseptics should not be discarded.

Dr. Bahnson nominated Dr. Hunter McGuire as an Honorary Fellow of the Society, and he was unanimously elected—a rare honor by this Society.

Officers for the Ensuing Year.—President, Dr. Henry T.

Bahnson, of Salem; *Vice Presidents*, Dr. G. G. Smith, of Concord, Dr. J. L. Nicholson, of Richlands, Dr. C. M. Pool, of Salisbury, Dr. H. B. Ferguson, of Halifax; *orator*, Dr. M. Hayes, of Oxford; *Committee on Publication*, Drs. T. F. Wood, Geo. G. Thomas, W. T. Ennett and J. M. Baker; *Board of Censors*, Drs. W. J. Love, Geo. G. Thomas and W. W. Lane; *Delegates to American Medical Association*, Drs. A. B. Pierce, C. J. O'Hagan, N. J. Pittman, S. D. Booth, Jno. H. Tucker, W. D. Hilliard, A. G. Carr, J. W. McNeil, F. M. Garrett, Eugene Grissom, Henry Tull and E. H. Horne-day; *Delegates to Virginia Medical Society*, Drs. W. T. Cheatham, P. L. Murphy; *Delegates to South Carolina Medical Society*, Drs. Geo. W. Graham, Chas. Duffy and N. J. Pittman; *Secretary*, Julian M. Baker; *Treasurer*, R. L. Payne, Jr.

On motion of Dr. Geo. W. Graham, it was decided to hold the next convention at Charlotte.

During the *Night's Session*, the Hall was well filled and a few ladies were present to hear the *Annual Oration* by Dr. G. W. Long, of Graham, who announced as his subject, "*Some of the Aims and Purposes of the Medical Profession.*" The address was brief, but pointed in its hits, suggestive in its nature as to how to become a worthy physician, and in short, was replete with practical common sense.

The time of next annual meeting was set for the second Wednesday in April, 1887.

Dr. Thomas reported that none of the prize essays received by the committee were deemed worthy of the Society's award.

On motion of Dr. Thomas, President appointed Drs. R. H. Lewis, W. J. Jones and McDonald Committee to award Prize Essay.

Dr. Dunn moved that the Code of Ethics be published with the proceedings of this meeting. Carried.

The President appointed as committee on awarding Pittman prize, Drs. Chas. Duffy, A. B. Pierce and W. T. Cheatham.

THIRD DAY—Friday—May 21st.

From 9.30 A. M. till about 1.30 P. M. was spent by the Society on a trip down the river in acceptance of an invitation by the Board of Trade and Cotton Exchange of Newberne, and was greatly enjoyed.

At 3 P. M., the Society reassembled in the Court-Room.

On motion of Dr. Young, Drs. Geo. W. Graham, J. P. McCombs, S. B. Jones, R. H. Gibbons and H. M. Wilder

were appointed a Committee of Arrangements for next annual meeting at Charlotte.

Dr. Graham, the retiring President, surrendered the gavel to the President elect, Dr. Bahnson. Appropriate addresses were made.

Several papers on different topics were submitted and referred to the Publication Committee, and some clinical discussions were engaged in.

The President appointed the following Chairmen of sections:

On Practice of Medicine—Dr. Isaac W. Taylor.

On Surgery—Dr. Frank Brown.

On Medical Jurisprudence—Dr. Sion Rogers.

On Pathology and Microscopy—Dr. D. T. Taylor.

Obstetrics and Gynæcology—Dr. E. M. Littlejohn.

Materia Medica—Dr. W. L. Crump.

Diseases of Children—Dr. L. W. Battle.

After some further routine business a motion to adjourn to meet at Charlotte on the 2d Wednesday in April, 1887, was carried.

Book Notices.

Chart of Physical Signs of Diseases of the Heart and Respiratory Organs, including Thoracic Aneurism. By R. C. M. PAGE, M. D., Instructor in New York Polyclinic in Department of General Medicine and Diseases of the Chest, etc. Revised. J. H. Vail & Co. 1886. Cloth. Price 50 cents. (From Publishers)

Leaving out of consideration the few distinguished auscultators, such as DaCosta and Austin Flint—so recently deceased—where is the student or careful practical observer of morbid conditions of the thoracic viscera who has not been sorely puzzled in formulating a method by which to accurately diagnose abnormal conditions hidden within the casket containing those precious jewels—the heart, with its appendages, and the lungs? It is not difficult, we admit, to determine a diseased condition of the thoracic viscera; but in considering the character of the disease of either heart or lung, accurate diagnosis is often absolutely necessary to even an approach to success in treatment. Thus no physician, whose auditory functions are well performed, can fail to detect the difference between the natural heart sounds and those heard when the organ is in a state incompatible with

health; but comparatively few (and it is a matter certainly of regret) can say positively whether a given murmur proceeds from the mitral or tricuspid, or semi-lunar orifice; or immediately proceeding the systole, or following diastole, or heard during the interval of rest. Dr. R. C. M. Page, of New York city, has, we believe, in his "Chart of Physical Signs," placed within the power of students of diseases of the heart the means of locating with certainty the particular seat of abnormality existing in the organ. In the Chart, the natural sounds of the heart are arranged in *bars*, showing the intervals of time occupied by them respectively, as also the interval between the systole and diastole, and the interval of rest. Then, just as on a sheet of music the musician reads upon the paper the modulations of sound necessary to produce either symphony or discord, so in the Chart, the student, though not a musician, reads with accuracy what are the departures from health when any given sound or impulse greets his ear, applied to the chest wall. In the presentation of lung sounds, normal and diseased, the student or practitioner has placed before him, in accurate and concise detail, all the conditions under which the organ, as such, exists—beginning with the regular rythmical cadence of normal respiration, and passing on through all the various phases of disease to complete solidification, cavities, etc. In this section of the Chart, also, the author has exhibited considerable ingenuity in arrangement of lung sounds on a basis of musical intonations, as said sounds fall below, rise above, are too prolonged, or fall short of the natural key-note of respiration. This little Chart is invaluable, and should be in the hands of every live practitioner who attempts auscultation or percussion. N.

Treatise on the Diseases of Infancy and Childhood. By J. LEWIS SMITH, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College, New York. Octavo, 867 pages, 40 illustrations. Cloth, \$4.50; leather, \$5.50. Philadelphia: Lea Brothers & Co. 1886.

Dr. Smith's work has justly become the standard authority all over the world as *the* book on "children's diseases." This sixth edition is so thoroughly revised that we can scarcely refer to an advance in the department of pediatrics within the past few years that has been announced in the journals which is not discussed in these pages. He holds to the duality theory of diphtheria and croup; and in regard to the alcoholic treatment of diphtheria, while an advocate of the use of spirits, he yet cannot agree that it is in any

sense a "specific" for the disease. The chapter on "cerebro spinal fever" is an admirable one. Indeed, the whole book is admirable, both for the practitioner and student. Dr. Smith writes from a large experience and a close observation of cases at the bedside. He is extremely practical, and these facts make the work what it ought to be—the best of all works on diseases of children. It needs no commendation from our pen; the simple announcement of the publication of a thoroughly revised edition, which is finely indexed, and handsomely issued, will prove sufficient to bring about the rapid exhaustion of the present edition.

Principles and Practice of Surgery. By FRANK HASTINGS HAMILTON, A. M., M. D., LL. D., late Professor of Practice of Surgery, with Operations, and of Clinical Surgery, Bellevue Hospital Medical College, etc. Illustrated with 472 Engravings on Wood. Third Edition, Revised and Corrected. New York: Wm. Wood & Co. 1886 Cloth. 8vo. Pp. 989. (From Publishers).

A friend at our side who has been examining this book remarked: "It is a little old timey, but all the better for that," because it gives the real *personal experience and observations* of a surgeon whose opportunities have been great, judgment good, and success brilliant. Facts are given as they are—without blandishments or coloring—and operations are described with the plain simplicity of style that characterizes an honest man and the eminent teacher that our author is. He is not an advocate of "Listerism in all its details," but like the best of surgical practitioners, attributes his success to cleanliness and fresh air. Dr. Hamilton makes no attempt to write an encyclopædic work, and sometimes he fails to allude to what may be called items of common practice, because his own practice has been sufficiently successful not to warrant him in laying aside established usages to adopt new practices. Thus he makes no allusion to the use of sandal wood oil in gonorrhœa, etc. He is content to let well enough alone. No practitioner would go astray in adopting this as his sole text-book regarding all matters of which it treats. We commend the book unqualifiedly.

Other Book Notices, we regret to say, were crowded out of this issue. They will be published in the July number.

VIRGINIA MEDICAL MONTHLY,

[ESTABLISHED APRIL, 1874.]

RICHMOND, VA.

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LONDON B. EDWARDS, M. D.EDITOR AND PROPRIETOR.

Original Contributions solicited from all sections; but the Editor does not hold himself responsible for the views of authors.

Articles contributed to the pages of this Journal must not be duplicated in other journals by the author without proper credit being given to the Virginia Medical Monthly.

Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

American Medical Association.

The session at St. Louis was a great success. Harmony was restored to the American profession. Our pages are filled with the proceedings. The rejection of the Philadelphia delegation was perhaps too harshly done. The social features surpassed anything in the history of their Association. The Association is indebted chiefly to our friend, Mr. J. W. Lambert—proprietor of Listerine, etc.—for the great enjoyment. Handsome displays of excellent preparations were made in the Exhibition Hall, etc., by the Lambert Pharmaceutical Company, Battle & Co., Rio Chemical Co., Geo. K. Hopkins Co., A. A. Mellier, Peacock Chemical Co., Parke, Davis & Co. Want of space forbids further comment.

Battey's Operation Unjustly Claimed by Tait.

It seems singular at this late day that Mr. Lawson Tait should set up a claim to priority in the successful performance of the operation properly known as "Battey's." We are glad to see the "error of statement of results of Battey's and Tait's operations corrected" by Dr. Robert Battey himself in the *Medical News*, May 15th, 1886. He says: "In his Note on Removal of the Uterine Appendages (page 456, current volume of the *Medical News*), Mr. Lawson Tait inadvertently says of my original operation: 'It was first performed by Battey, with a fatal result, on August 17,

1872, and therefore, if proper names are to be given to the operations, it deserves to have Dr. Battey's name attached to it.'

"This case has so often been reported to medical societies, and cited in the journals, in London, as well as in America, as a *successful* case, that I can hardly suppose Mr. Tait to be ignorant of the fact. I therefore accept it as a slip of the pen, in the hurry of a busy professional life. I can the more readily do this, since in the same connection, he is quite as unhappy in reporting the result of his own case, when he tells us, 'It was first performed by me on August 1, 1872, with a *successful* result. I am therefore entitled to have this operation described by my name.'

"In the *British Medical Journal* for May 31, 1879, we find from the pen of Mr. Tait the following: 'Removal of normal ovaries. As a small contribution to the history of this proceeding, I should like to supplement Prof. Simpson's paper by the statement that I have removed the ovaries for the arrest of hæmorrhage in cases of myoma three times, *in all three with a fatal result*. The dates were August 1, 1872; December 26, 1873; and March 14, 1874. It will thus be seen that this operation was performed in England five days *after* it was first performed in Germany, and sixteen days *before* it was performed by Dr. Battey. . . . That this operation will prove a great addition to surgery I have no doubt. With our improved methods, I believe that at least two—possibly all three—of my cases would recover now, if I had them over again.' [*Italics Dr. Battey's.*]

"To Mr. Tait's claims of priority I have nothing to say. For more than six years (from September, 1872, to May, 1879), during which this subject was actively discussed in medical societies and medical journals, his voice was not heard. There seems little disposition manifested anywhere to re open the case now for his benefit."

Medical Society of North Carolina.

We regret that our report of the proceedings of this Society has to be so materially curtailed. The North Carolina profession is a peculiar one—it seems not to be aware of its own excellence. It is seldom heard from through journals published outside of the State. North Carolina is wanting simply a city sufficiently large for a distinctive medical centre. But knowing personally, as we do, many of the doctors of North Carolina, and having a like acquaintance with many of the profession of other Atlantic States, we are constrained

to acknowledge that, rank and file, North Carolina furnishes the best educated doctors of any of these States; and numbers of them, were they to locate in medical centres, would shine out as brilliant stars in the galaxy of great men of the medical profession of America. We attribute a great part of this special excellence to the strict fidelity with which the North Carolina State Board of Medical Examiners has been doing its work for the past twenty years.

Dr. Hunter McGuire, President American Surgical Association.

It was a compliment which the South appreciates in having the American Surgical Association bestow its highest honor, for the ensuing term, upon Dr. Hunter McGuire, of this city—especially as he was unable to attend the session in Washington, D. C., April —, 1886. And yet no surgeon in the country more richly deserves the honor because of skill, success and eminence. Dr. McGuire was also elected an Honorary Member of the Medical Society of North Carolina during its recent session in Newberne, May 18–20.

Dr. A. C. Jones,

of Newport News, Va., has been appointed Health Officer at this important and rapidly developing seaport town of Virginia. He is a Fellow of the Medical Society of Virginia, and is in every way an excellent selection for the responsible duties—especially during the Summer months.

Dr. J. F. Winn.

We recognize it as a deserved compliment to our townsman and confrere, Dr. J. F. Winn, Editor of the *Sanitary Monitor*, that he has recently been elected Associate Foreign Member of the Société Française Hygiène. Dr. Winn is becoming prominent among American sanitary students and physicians, and all such honors bestowed on him are but just recognitions of the value of his works in sanitary science.

Dr. M. L. James—

has resigned as Dean of the Medical College of Virginia. We have not heard who will be his successor; but no one in the Faculty is left who will devote so much pains-taking and unremitting labor to the duties of the office. The result, we fear, will be noticed when the Winter session of 1886–7 sets in.

Sayre's Suspension Treatment in Germany.

The slowness of the introduction of the now only right way of treating spondylitis (Sayre's method) in Europe—especially in Germany—is surprising. The principle is so simple, when once explained, that a child, it seems to us, would readily understand it; and the results so remarkably good that nothing else thus far suggested can be compared to it in value. It is only as recently November 3rd, 1885, that, at a meeting of the Hamburg Medical Society, Dr. Nebel in reporting the late favorable result in the General Hospital at Hamburg, says: "The first results with the plaster-jacket were, on the whole, unsatisfactory, in consequence of many misapprehensions of the author's meaning, and also because the bandages were less skillfully applied than by Sayre himself. The re-introduction of Sayre's jacket first of all in the hospital in this city and from thence throughout Germany is due to the zeal and kindness of Dr. Phelps, a friend of Professor Sayre, who remained here for several months."

The First Woman's Hospital.

Dr. E. C. Dudley, of Chicago, Ill., in the October number, 1885, of the *Chicago Medical Journal and Examiner*, says: "It is generally supposed in America that the 'Woman's Hospital in the State of New York,' established by Dr. J. Marion Sims, was the first of its kind in the world. This is a mistake. Dr. Sims himself, in a letter to Dr. Protheroe Smith, of London, dated July, 1883, accords to that gentleman the honor of having established the first hospital specially for the treatment of the diseases of women. This hospital, founded in 1842, is now a flourishing institution in London, and is called the 'Hospital for Women.'"

Dr. Protheroe Smith retains his official connection with the institution as Senior Physician, and is still engaged in active practice. He was among the first to advocate, against bitter opposition, the use of anæsthetics in labor. Efforts are being made, with great promise of success, to raise funds for the construction of a larger and more appropriate hospital building.

Correction.

Page 130, List of Physicians Licensed by the State Board of Examiners. E. S. Brady, Buffalo Gap, Va., should be Dr. E. T. Brady, Buffalo Forge, Va., Jefferson Medical College.

VIRGINIA MEDICAL MONTHLY.

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Original Communications.

ART. I.—**Elevated Temperature in Some Cases of Pernicious (Congestive) Malarial Fevers.** By JOSEPH JONES, M. D., Visiting Physician of Charity Hospital, New Orleans, Louisiana; Professor of Chemistry and Clinical Medicine, Medical Department of Tulane University of Louisiana, etc.

It is worthy of note that many of the cases of congestive or pernicious malarial fever, and especially of the *comatose* variety, frequently manifest an elevated temperature.

The following cases will illustrate this proposition:

CASE I.—*Comatose Malarial Fever.*—Emanuel Carneno, native of Portugal, entered ward 30, bed 448, Charity Hospital, October 13th, 1874; had suffered with malarial fever for four months; pale, anæmic, sallow, dark hue; general anasarca; urine free from albumen. He appeared to be improving slowly under the action of quinine, iron, arsenic.

On the 5th of November, 1874, the patient was seized with a severe chill and became comatose. There was a rapid rise in temperature, and one and a half hours before death, whilst the patient was in a profound coma, the temperature of the axilla was 107.5° . No albumen in the urine. Died during the night of the 5th, all measures having failed to arouse the patient from the comatose state.

Post-Mortem Examination.—*Heart* and lungs normal. *Blood* deficient in blood corpuscles, and of low specific gravity, abounding in a thin serous fluid; general anasarca. *Liver* dark brown and slate color on the exterior; interior of a dark bronze hue; deposit of dark pigment, and pigment cells within and around hepatic capillaria. Bile thick, dark and abundant, about 1800 grains of dark bile in gall-bladder. *Kidneys* normal. *Bladder* contained high-colored urine, rich in urea, but free from albumen casts and colored blood corpuscles. *Cranium*, membranes of brain as well as the blood vessels of the brain substance greatly congested with dark blood; cortical substance of the cerebrum and cerebellum of a dark gray and chocolate color; deposits of dark pigment and of large pigment cells within and around central capillaries. Blood, urine, brain, and spinal cord congested with blood.

CASE II.—*Pernicious Malarial Fever.*—In a similar case, which was brought into Charity Hospital in a comatose condition, the patient, although anæmic and anasarcaous with enlarged spleen and liver, manifested, during the early forty-eight hours of life passed in a profound coma, a temperature in the axilla of from 104° to 106° F. Immediately before death the temperature was 106°.

CASE III.—*Pernicious Malarial Fever.*—M. Shea; age 27; entered ward 18, bed 206, Charity Hospital, November 3d, 1884; comatose; passes urine and fæces in bed; jaundiced; hot, dry skin. There was marked capillary congestion; great epigastric tenderness; urine contains blood corpuscles (red), albumen, and blood casts of the tubuli uriniferi. Liver and spleen enlarged. Heart and lungs healthy. Pulse rapid and feeble, 192 beats per minute; respiration 42 per minute; temperature of axilla 103.7°. The patient continued in a comatose state and died within twelve hours after his entrance into the hospital. During this period the eyes were fixed in one position, and the pupils did not respond to light.

It was ascertained that the patient had suffered with malarial fever before entering the hospital.

Post-Mortem Examination. Heart and lungs normal. Dependent portions of lungs congested. Pericardium contained about two fluid-ounces of golden yellow fluid. Liver enlarged, greatly congested, and pervaded by pigment granules. Spleen enlarged, about three times its normal size, and filled with dark purplish altered blood or splenic mud, rich in hæmaturia, pigment corpuscles, and altered colored blood

corpuscles. Kidneys enlarged and greatly congested. Urinary bladder contained about five fluid-ounces of red urine, which contained some blood. *Brain* congested; gray matter of a dark chocolate color from deposit of pigment granules and cells.

CASE IV.—*Pernicious Malarial Fever.—Sudden Death.*—Peter Vooling; age 45; native of Ireland; laborer; entered ward 13, bed 163, January 3d, 1883.

On the 1st day of January, 1883, whilst working on the banks of Mississippi river, was seized with a violent chill which rendered him unconscious. He entered Charity Hospital January 3d. Slight jaundice; great muscular prostration; rapid pulse, 125 per minute; temperature of axilla 103° F.; stomach very unstable; great tenderness of epigastrium; tongue very red at edges and coated with dark brown fur in centre. When the epigastric region is pressed the patient complains of great tenderness and pain. Bowels constipated; complains of violent pain in the occipital region. Urine scanty and contains a small quantity of albumen.

On the morning of January 5th, whilst the patient was attempting to eat a little toast and milk, he was suddenly seized with a violent chill; the hospital steward, upon being called to his bed-side, found the patient in a comatose state, his lips and skin covered with a cold, clammy sweat; pupils contracted; in a short time afterwards the patient died.

CASE V.—*Pernicious Hæmorrhagic Malarial Fever.*—John Golvin: age 21; native of Ireland; laborer; admitted to ward 14, bed 183, Charity Hospital, October 12th, 1882; complained of great pain in head and lumbar region; intellect dull; aroused with difficulty, and then complained of pain in the head and back. Bowels constipated. 12 M., patient in full perspiration, dull and drowsy; 8 o'clock P. M., patient stupid, great tenderness in epigastric region; pupils dilated; temperature 101° F.; pulse 120; respiration 22. Tongue red at tip and edges, heavily coated with brown fur.

October 13th, morning, nurse stated that the patient had fallen out of bed during the night. Pulse very rapid; respiration 18; temperature of axilla 104° F.; intellect dull; great tenderness in epigastric region. Patient has passed small quantities of urine during the night and morning. Evening—Temperature 101° F.; pulse 96; respiration 18; great tenderness and pain on pressing the epigastric region; patient very restless.

At 9 o'clock P. M., the patient vomited black matter

resembling coffee grounds. Pulse feeble and gaseous; great capillary congestion. Patient died about 2 o'clock A. M., October 15th, 1882.

Post-Mortem Examination.—*Lungs* normal. *Heart* soft and contained an abnormal amount of fat. *Stomach*—mucous membrane congested, and the viscus contained a small quantity of dark blood. Liver, spleen, and kidneys greatly congested. Liver and spleen of a dark slate color. The urinary bladder contained a small quantity of urine, which, upon examination, was found to be albuminous.

We conclude from the preceding facts:

1st. Pernicious paroxysms frequently occur in patients who are suffering from the prolonged action of the malarial poison, which has already induced profound lesions of the blood, brain, liver, and spleen.

2d. Pernicious malarial fever is frequently characterized by high temperature, which may continue during the most profound coma, even up to the moment of death.

3d. The phenomena of pernicious (congestive) malarial fever indicate the action of a prompt poison or morbid ferment.

156 Washington Avenue, corner Camp Street.

ART. II.—**The Dietetic Treatment of Disease.*** By W. T. DAWSON, M. D., New York, N. Y.

It has always seemed very strange to me that the study of food in its relations to disease should receive absolutely no consideration in a medical education. When compared with the great developments in medicine of late years, our knowledge on this subject is lamentably deficient; indeed, I might say that no two of us have clearly defined or well established and harmonious views on this subject. Surely, it is a reproach to medical men that such should be the case. The scramble for reputation as men of science, learned in all the niceties and useless refinements of germs, antiseptis and

*Read before the Manhattan Medical and Surgical Society, May 1st, 1886.

theories *ad libitum*, has left no room for such homely topics, either in our studies or practice.

There is no need to discuss the why and wherefore of such a state of things, for the fact is patent enough; and if we have, at last, recognized our failings in this particular, it behooves us, as practical, as well as scientific men, at once to set about the remedy.

The subject is worthy our best efforts, and its importance, in my mind, is not second to that of medication. The reputed father of our craft recognized it when he said: "The art of medicine would not have been invented at first, nor would it have been made a subject of investigation, if, when men are indisposed, the same food and other articles of regimen, which they eat and drink when in good health, were proper for them;" but I fear his successors have never lived up to such sound suggestions. Take up any text-book or periodical, and examine the treatment of almost any trouble. The diversity of opinion, the absolute contradictions as to treatment, the emphatic assertions that such and such procedure is the best, and withal, the variety of results attained in any given case, are simply appalling! One man will cauterize a diphtheritic throat as if he were branding cattle; and if the case recovers in spite of him, "behold! a brilliant success, the only correct treatment," etc. Should the child die, "Well, that is what we must expect; and all our skill and science has been futile, though, of course, not in any contributory sense." Another denounces this treatment; and by his own gentler, but equally empirical methods, reaches pretty much the same conclusions. The want of unanimity amongst the great lights of the profession is the first stumbling block in the path of the tyro, nor does he apparently come nearer a solution of the riddle as his knowledge increases.

This is no simple matter of individual judgment as might at first appear; its cause lies far deeper and argues a serious weakness in the symmetry of medical practice and development. Our pathology has grown at the expense of our treatment; and, instead of their marching hand in hand, how often do we hear it said of so and so, that "he is a very sci-

entific man, a wonderful pathologist;" and of another, "his pathology is not all it should be, but he is an excellent doctor," etc. There is unquestionably a large gap to be filled up between our theory and practice, which seems to yawn almost as widely now as formerly. The salutary influence of the bromides in epilepsy is rarely more than a modifying one; but, despite our certain knowledge, we go on loading up the poor wretch, thus doubly afflicted, till, saturated with the remedy, he actually overflows into acne, impaired general health, melancholia, sometimes even dementia or imbecility; the convulsions continue, and we charge them with the damage done, but I doubt if we could prove our case. It is unnecessary to multiply illustrations, for there is hardly a case in the whole catalogue of diseases, which would not equally well convey my meaning.

Just here let me say, by way of parenthesis, that I think it most unfortunate that tradition and custom should ever have come to play so large a part in the practice of physic. I see no cause for conflict between our proper reverence for the antiquities of medicine, as of art, and that conservative independence of thought and action, without which no progress is possible. But I do think we are often unconsciously led along certain lines by the dicta of others, based on insufficient grounds; and, although often difficult and sometimes dangerous, it is no less the duty of every man to justify his conduct, as far as possible, on his own evidence and responsibility.

I would not, however, be misunderstood as condemning, in a wholesale way, all medication. Happily we can point to a few specifics as one of the great glories of medicine. Nothing will take the place of quinine in fevers of malarial origin; but it does not follow that we can reduce the temperature of other states with it, nor can we, unless it be given in quantity sufficient to injure the patient. Yet how often is this very thing done, either with some foolish hope that it may, or from an equally pernicious notion that some active antipyretic medication is indicated and necessary. The fact that iron enters so largely into the composition of healthy blood and tissue, certainly does not argue that our

capacity for such blood-making is unlimited; but I have known its administration in drachm doses every hour, advocated and practised on the supposition, I imagine, that it would miraculously prop up the declining strength pretty much as it supports the elevated railroad.

The self-limited nature of disease furnishes our best argument against much medication. I do not believe in the abortion of an essential fever, except it be in the sense that judicious treatment greatly modifies its severity. They must and will run their course, and, just in proportion as we recognize this fact and guide our patient over the rocks and shallows, the greater our success will be.

Take, for example, any acute disease, where high temperature and excessive tissue waste are the chief indications to be met, as in typhoid fever. I assume, to begin with, that no drug so effectually or safely reduces and keeps down the fever as the bath, whether of cold or tepid water, regularly applied, or water and alcohol sponged over the surface. Any one who has sat by the sick bed and seen the delirium of fever give way to the calm, refreshing sleep that follows a sponging of the surface, must admit its good effect; and, during sleep, nature has a chance to recover herself and renew the struggle on more even terms. What is, then, our next most urgent need? Simply to sustain the strength of our patient while nature—the true *vis medicatrix*—heals the wound. Here you have the whole treatment of typhoid.

But I hear some one asking, “what have all these commonplaces to do with diet?” Simply this: To plead for less medicine as an introduction to more judicious, discriminating and scientific feeding. The use of drugs must be in a measure necessary so long as disease exists, but our therapy is and must be a variable quantity until we make medicine an exact science.

As we come to discover the source and action of our medicinal agents, we wisely set aside the old, nauseous, cumbersome potions, boluses and mixtures, which have grown to be the synonym for Allopathy, and adopt the more efficient and easily administered so-called active principles in concentrated form and strength, to say nothing of the hypodermic

and inunction methods now advocated by some to the exclusion of drugs by the mouth.

Nor are these refinements, remedially speaking, merely a passing fashion, but are, more or less, the result of the demands of physician as well as patient. The doctor has been dosing his patient with all sorts of fantastic compounds since time began, until the poor, long-suffering stomach has ceased to have scarcely any other function than that of a receptacle for mixtures which the more discriminating system at large has refused to accept, and what is the result? Why, none in very many instances, except that tired nature at last gives up to the unequal struggle and feebly protests in dyspepsias, unlimited in form and variety, perversions of nutrition and function of all sorts, and general demoralization, worse than the original malady. He has labored according to his lights with various wisdom and perseverance worthy of a better cause, but his patient does not get well, and he is only perplexed to account for the want of harmony between his scientific reasoning and the actual facts in the case.

The old blood-letting, purging, depleting—often starving system—or, as Lady Chettam would call it, the “lowering plan,” has passed into the curiosities of medicine, never to be revived; but contrary to the law of re-action, the pendulum has not yet swung to the other end of its arc.

By dietetic treatment I mean all that the word may imply, provided we feed with the same keen reasoning that we apply to the elucidation and harmonizing of clinical facts and theoretical arguments. Feed, when indicated, to the utmost limit of the power of the system for assimilation; in other cases with more moderation, but no less logically and persistently; while there is still a large third class that, I doubt not, may often be physiologically starved in certain directions, with happy results. In short, in general terms, all disease may be considered as *sthenic* or *asthenic*—“something less than life,” as Hughes Bennett cleverly puts it—according to the most modern research which reduces it to a perversion of nutrition, a definition which is itself pregnant with suggestions for our guidance.

The ancient Arabian treatment of syphilis by starving the

poison out of the patient was a heroic example of dietetic treatment; yet I can fancy there may be cases of various kinds where such procedure might be proper and beneficial. As our specifics were then unknown, such practice seems intelligent and rational. Have you not frequently seen one of those persistent, racking neuralgias—the so-called sick headaches of nervous, anæmic, poorly-nourished women—yield at once to a generous and full diet of the most nutritious kind, after resisting all remedies, locally and internally? It is often very difficult to induce a patient to eat as a therapeutic measure, and the physician sometimes perils his practice by such advice.

Our distinctively American disease, dyspepsia, will best illustrate my notion of dietetic treatment; and the extent to which it enters into most of our ailments, in some form, should make it doubly forcible. Let the variety be what you will; let the fault lie in a deficiency, or excess or supposed faulty composition of any of the digestive fluids; let it be gastric, intestinal, or hepatic, or all combined, and I don't hesitate to say that, so long as the trouble is functional, it is curable, *but not by medicines*. Certainly the various symptoms may be more or less relieved and temporarily modified by drugs. But you will run the gauntlet of stomachics and anti-dyspeptics in vain; for cease your medication and your case is soon as bad as ever.

Now try the dietetic treatment, easily enough suggested, but much more difficult of application than the former. It requires not only self-denials, but great patience and perseverance, for it is no easy task to convince many people that drugs are totally unsuited to their particular case. Search out and find, as can always be done, what diet is and is not best for each case; make your rules absolutely inviolable and compel your patient to eat *only* what you order—all of which is feasible and not inconsistent with a wise regard for the patient's appetite and inclinations, for if you make eating a labor you will largely impair its efficacy. Above all, insist on thorough mastication, slow and frequent eating, with the utmost regularity, and better four light meals a day than two hearty ones. Never allow the dyspeptic to satisfy his

appetite, however palatable or digestible the food may be, but rather require him to stop a little hungry.

Here I must protest against the position not long since assumed by the late Dr. Flint. He says let the patient eat any and everything at all times and under all circumstances; in fact, consult his own fancy and the caprice of his appetite and he gets the same results; that is, an implied not definitely specified case, in the nature of things the very best possible prognosis. This I consider both unscientific and irrational.

The one great difficulty is to induce the dyspeptic to eat at all; he loaths *all* food, and its mere suggestion is often sufficient to provoke a violent aggravation of his ailment. Does the Doctor hold that the dyspeptic stomach is in a condition to receive and dispose of that which is its proper fuel, so to speak, when the machine is in complete working order? If so, where is the dyspepsia or indigestion? All reason and experience negative such views, and, were his position otherwise tenable, what becomes of all our proved and accepted physiology? On the contrary, it is just such unwise and indiscreet conduct which has brought about the existing condition. For example; Called to any given case of sickness, the average procedure is as follows: An elaborate pathological differentiation of the varieties of the type under consideration, a careful and generally correct diagnosis, minute details as to treatment and dosage, with a parting injunction in very general terms, to feed the patient well; give him all the milk he can drink, eggs, broths, soups, beef-tea, stimulants, etc., *pro re nata*, which actually means "according to fancy or convenience."

Now this, I hold, is all wrong, and without doubt an impediment to the successful battling with diseases. Our materia-medica and diet being both so largely taken from the vegetable world, there is no reason why the two subjects should not receive equal attention; and I venture to predict that in the near future the scientific study and practice of this subject will very materially increase our ability to cure.

As a matter of fact, I am thoroughly convinced that the integrity of the whole digestive apparatus is our greatest

safeguard against the invasion of disease, so that it is not unreasonable to infer that its restoration, when impaired, will also contribute, in great measure, towards the eradication of any complication or intercurrent morbid condition.

I will merely hint at the contrast of two epileptics, rheumatic, gouty persons; the one treated mainly with drugs (the usual practice), the other being fed first and drugged afterwards. It needs no pen picture to set them off; such cases are encountered by us daily, but not as a rule.

As to foods: Their quality, quantity, method of preparation, and uses as a therapeutic means are yet an undiscovered country, an unknown factor in our practice.

Liebig's division of food into tissue food and fuel food furnishes a good working basis for the study and practice of this subject. He holds that certain food constituents are consumed in building up tissues which are constantly wearing out and in need of repair, in health as well as in disease, while still others go to supply that force of energy or vitality implied in the mere fact of existence. Under the former head may be classed all nitrogenized, albuminous material, or that which being only slowly or partially oxidizable, requires more time and greater vigor of function for its digestion and assimilation, such as meats.

Fothergill says of beef-tea, which is as ever present in the sick-room nowadays, as it is generally useless, "it is a stimulant, not a food, from the presence in it of nitrogenized principles, which are past the tissue-stage, and therefore useless as "tissue food," while its "fuel food" value is *nil*; to give it to the hungry man is to "give him a stone when he asks for bread." This is strong language and perhaps will provoke opposition, but physiological chemistry has rendered the verdict, from which there is no appeal. Beef-tea is nothing but a watery solution of those principles, for which there is no positive urgent demand in the acutely sick, to whom we are most accustomed to give it. What such a patient needs is "fuel food;" that which being quickly consumed, supplies the material to carry him over the immediate danger, and such are the hydrocarbons, fats, oils, starches, sugars, etc., articles rich in water and easily digestible.

Milk, combining all the various ingredients of the several classes of alimentary principles, is a typical food, of course; but there are conditions where even it is not admissible in its natural state, 'especially and unfortunately, those acute states, in which we are so apt to order it, and find on our next visit that it has been rejected by the stomach.

Without meaning to confine myself to fluids, I cannot omit the observation that I think our notions in regard to the use of water as an article of diet, are both crude and faulty. Being nature's greatest solvent and entering into such an extent as it does into the composition of all organic matter, it is very necessary that we should appreciate its importance and function in our physical lives. Perhaps some of you have noticed that there are certain persons who, for various reasons, drink very little water. My observation warrants the assertion that they are generally of poor physique, especially in respect to vitality and muscular development, but exhibit a correspondingly sensitive and highly organized nervous system. Their capacity for labor or fatigue is measured by their will power, and any disturbance of the delicate nervous balance is sufficient to induce grave disorder of the various functions or the economy as a whole. Undoubtedly that water should be taken freely is a normal demand of nature, and the idea (which I have often heard offered in an explanatory way) that it dilutes the digestive juices, interfering thus with proper digestion and assimilation, is shown by experience to be arrant nonsense. Let us be careful to put the blame where it justly belongs, for observation shows the free water drinker to be well-nourished and developed, functioning well in all particulars, strong and often a little too fat. I never restrict a patient's use of water, at a proper temperature, of course; and instead of disagreeing, it is always grateful and seems to meet a want which nothing else can, liquid or solid.

In the matter of chronic disease, we have an equally inviting field. Pathology and the microscope have laid bare the mysteries of tissue, normal and abnormal; but here they desert us, except to stimulate our zeal for remedial agents; and it is quite possible that enthusiasm has dulled our per-

ception and warped our judgment, since we unconsciously ignore our own teachings.

Our knowledge of the morbid processes of disease should prompt us to the adoption of every means to meet the indications; and, since drugs so entirely fail to supply our needs, may we not wisely invoke the aid of any other treatment which seems so plausible and promising.

I do not propose to discuss the chemistry of foods, but will only refer to the wonderful advances already made in the artificial feeding of the sick by means of the various beef extracts, peptic preparations, and foods of different kinds. They are a step in the right direction, but as yet, are only suggestive of their use. The work is to be done by the organic chemist and the physiologist, but they must fail in the end unless sustained by the enlightened observation and persevering application of the practitioner.

400 West 57th Street.

ART. III.—**Dyspareunia.*** By GEO. BYRD HARRISON, M. D., Professor Diseases of Children, National Medical College (Medical Department of Columbian University), Washington, D. C.

As the subject of “difficult or painful coition” has never been directly considered in any of the essays or discussions of our Society, and as it is one in which the happiness of many human beings is closely involved, I have thought that a few, even desultory, remarks in reference to the condition might, at least, have the effect of eliciting from some of our fellows accounts (which would be both useful and interesting) of their experiences or observations in this direction.

It is doubtless due to the fact that the disorder is always dependent upon some pathological state or cause *precedent*, or, in other words, that it is merely a *symptom* that many systematic works on gynæcology ignore it altogether *as a separate topic*, preferring to treat it under the heads of the various states or lesions, of which it is a direct or indirect result.

*Read before the Washington Gynæcological and Obstetrical Society, May 21st, 1886.

To my mind this is a mistaken view, for the palpable and obvious reasons, that many of these "states or lesions" (upon which it depends as a result) in themselves receive but *casual* notice, *if any at all*—at least in works devoted to female diseases, properly so-called—while surely no one can doubt that the condition itself furnishes a subject proper and germane to the science of gynæcology.

Dr. Barnes, in reviving the word "dyspareunia" (which had long before the Christian era been employed by the poet, Sophocles, to designate *difficult or painful coitus*), has not only given to the subject *individuality*, but an *impetus* to its *particular study* as well.

Dr. Edis has allowed it quite a prominent place in his recent very practical work on the diseases of women, and has treated the matter both systematically and exhaustively. His list of *causes* is very extensive, and about as complete as it could be expected to be, yet not altogether so, of course. I do not propose, however, in this paper to enumerate the multifarious and multitudinous conditions upon which painful, difficult, or impossible sexual intercourse may depend, because the imagination, experience, and research of each physician will supply causes enough.

I will, however, before presenting to you several cases of dyspareunia, which seem to me to be both interesting and instructive, quote from the very sensible writer just mentioned a few words of admonition. He observes, first:

"Owing to the mutual diffidence of the practitioner, as well as the patient, in entering upon such a delicate subject, dyspareunia is too often passed over without comment; and yet, if the truth were known, there are numbers of cases where this condition is the cause of much physical suffering, mental distress, and conjugal infelicity. In many instances it is a mere temporary condition, and may disappear without treatment, or by the employment of very simple remedies. In other cases it will continue as long as the condition producing it remains unaltered, even to twenty-five or thirty years, in fact becoming permanent."

In another place he gives this very pertinent suggestion: "If (while we are making examinations) any condition of the pelvic organs be detected in married women likely to produce inconvenience in sexual relations, although no com-

plaint may have been made by the patient beforehand, the practitioner will do well to inquire more carefully into the matter."

Not only as this author says, are "much physical suffering, mental distress, and conjugal infelicity," often the result of pain in the performance of the sexual act; but *sterility* is a likely, and *insanity* a possible consequence thereof. Indeed, in some cases, "conjugal infelicity" has been intensified, until divorce was the ultimate result.

CASE I.—*Dyspareunia Due to Peri-Urethral Tumor*.—On May 19th, 1880, I made an examination *per vaginam* of C. E., colored; married; a native of Virginia; 44 years old; last catamenial period in her 38th year, *i. e.*, six years before. History of four abortions, occurring between the fourth and fifth months of pregnancy; the first of these was said to have been due to direct injury, from an effort to pack wool in a barrel by getting into it and using the feet as compressors. No traces of syphilis which I could in any way make out. Attended during the *fourth* "miscarriage," as she calls it, by an ignorant farm midwife, who left the placenta unremoved. She was seen by a doctor a week later, who wondered that she was not dead, as she surely would have been had the weather been warm, and assured her that now nothing was to be done but take his physic and wait for the after-birth to rot away—by piecemeal. She was, at the time of examination, suffering from almost incessant desire to micturate with exquisite pain in the effort to do so. She stated that intercourse with her husband was so painful that she could not endure it, and that she was sorry for *him*, "poor fellow," he was so good to her.

I found the meatus urinarius, indeed the whole urethra, imbedded in a hard mass of tissue, which so occluded the ostium vaginæ that the passage of my index finger was actually difficult. The urethral canal seemed to run in a tortuous direction through this indurated tumor, and was so contracted in dimensions that I found it difficult (in subsequent efforts to wash out the bladder) to introduce even a very small flexible catheter. The whole of the anterior wall of the vagina, and externally, the supra-pubic region were sensitive to the touch, and painful upon pressure. The parts about the meatus were very tender and much inflamed. The urine was characteristic of aggravated chronic cystitis, containing an abundance of stringy sediment composed of diseased mucus and phosphates; re-action acid; sp. gr. 1020;

no albumen—the typical urine of the phosphatic cystitis of Golding-Bird.

The treatment of this case, as may be readily understood, was exceedingly troublesome and unsatisfactory, she being a washerwoman and refusing to lie by and be properly cared for. In view of the exacting nature of the case, I found it impossible to attend her unless she would go to the hospital, or employ a nurse, and submit to such treatment, medical or surgical, as I chose to adopt. She declined to accept either alternative, but has since, from time to time, come to me for palliative treatment.

I have in the last few days seen her and procured an examination. Her condition is somewhat improved. The hypertrophied tissues about the meatus are much softer, although the tumor still exists. By a liberal use of a four per cent. solution of cocaine hydrochlorate something like a satisfactory examination may be made, and the bladder may be irrigated. I think, without the exquisite pain which formerly attended that operation. She still abhors the idea of her husband approaching her, although realizing the anæsthetic properties of the cocaine solution which I advised her might be used with good effect a little before coitus.

It is worthy of note that the clitoris, although unusually large and prominent, seems to have lost all sensitiveness.

This is, I think, a very interesting case, as illustrating one class of causes which may lead to complete dyspareunia. The peri-urethral tumor is a complication to the possibility of whose occurrence no reference has been made by the authors I have consulted. Perhaps some of you are familiar with such growths in that situation.

“Vascular growths of the meatus” have been recognized as an occasional cause of this disorder, but this case does not come under that category, having been very dense in structure at my first examination, and remaining so for years, as my note-book for October, 1882, distinctly shows.

CASE II.—*Dyspareunia Resulting from Undue Length of Penis of Husband.*—The second case which I would describe is of a far more manageable and remediable character.

Lavinia —, whom I had known as the very respectable little colored nurse of the children of one of my patients, made her appearance during the spring of 1883, stating that her courses had stopped, and that she wished them brought

on. On cross-questioning her, I found that she had left her former employment, and had been engaged in an establishment in which there was a drinking saloon. She denied having lapsed from the path of virtue quite vehemently. But knowing the temptations of her situation, and the proclivities of her race, I insisted that she should give me her sacred confidence, and found at last that she was regularly cohabiting with a colored youth, who had evidently made conquest of her heart as well as of her person. I urged upon her the importance of denying him further favors unless he should agree to lead her to the altar of Hymen—feeling confident that her dusky charms would be potent to subdue him, for, in her Ethiopian way, she was very comely. The result was as I had predicted; they married, and he took her to Atlantic City for the summer. (I omitted to state that her catamenia were restored before her marriage without any interference on my part certainly, even to the extent of internal treatment.)

In October following she presented herself to me in much trouble. Her husband's approaches had of late been so painful as almost to inhibit intercourse, and although he was kind and dressed her well she was not happy. After close inquiry I found that his sexual parts were developed to a degree altogether disproportionate to those of his wife, especially in regard to the length of the intromitting member, and I conceived the idea that by "taking a reef" in his organ of penetration much might be affected towards a restoration of the domestic tranquility of this young couple.

Accordingly, I directed her to make with cotton-wool, and some stout fabric to cover it, a sort of ring-pad, or washer, somewhat like the rude drawing which I hand you now, and to cause him to wear this during the sexual act, so as to lessen the probability of his impinging upon and vulnerating the cervix uteri, which was very sore and sensitive to the touch of my finger.



The effect was magical. She called on me in *November* to say that "all went merry as a marriage-bell." Later on she came with unmistakable evidences of pregnancy, accompanying her confession with the somewhat ambiguous charge, "Doctor, *you* did it." The baby was born in due time, and I was a witness to its birth.

The principle of treatment in this case was not at all original with me, as I heard years ago of its being applied in the

case of a man of prominence in a neighboring State whose "length of limb" had been a cause of serious injury to a number of wives in succession.

I record the result here in no spirit of self-complacency; simply as an instance of dyspareunia due to a second variety of causes, and relieved by a very simple and obvious expedient. Of course a ring of soft or hard rubber would have been much more suitable if she could have procured it.

CASE III.—*Unavoidable Dyspareunia due to Congenital Deformity.*—The third case is one in which coïtus may never have been attempted, as the girl is unmarried, but there could not possibly be a complete performance of the act, by reason of congenital defect.

The case was one of Dr. Chas. E. Hagner's, and is described by me with his permission. Our Ex-President and Dr. Thompson will remember it well, having examined her under æther on March 21st, 1882.

A transverse membranous septum was found a little beyond the usual position of the hymen, completely obstructing the vaginal canal. The patient was 19 years old; had never menstruated in the regular manner, but vicariously at irregular intervals through the nose; her breasts were well formed; mons veneris covered with hair; clitoris and labia minora duly developed and normally sensitive.

Dr. Thompson operated on the case by thorough section of the membrane, which was found to be the anterior wall of a sac filled with glairy fluid, a specimen of which, under the microscope, exhibited scales of cholesterine, resembling in this respect ovarian fluid. The most patient and thorough examination, however, failed to reveal even a rudimentary uterus. And the girl, whom I have seen and examined within a few days past, has only a short *cul-de-sac* for a vagina; too short for her to entertain an idea of matrimony, even if her intended consort were willing to forego the hope of offspring.

This is a very sad case, for I am sure that the girl is desirous of marriage. Doubtless her ovaries are in a state of complete development. Is not Battey's operation indicated in a case of this sort?

CASE IV.—*Dyspareunia due to Mal-Position of Os Pubis.*—A fourth, and a distinctly recognized variety of dyspareunia, is due to mal-formation, or at least mal-position, of the os

pubis, which is abnormally depressed so low as to interfere with penetration *a ponte*.

I have seen but one case of this; that presented by a virgin who came to Dr. Barker's Clinic, at the Central Dispensary, during my term of service there. The consultation sought had no reference to this particular condition, but I was struck during the examination by the singular anomaly presented.

In these cases it is advised that all amatory approaches shall be made *a tergo* (as Edis says, "*more ferarum*"); a method which, I believe, has always been successful.

In the preparations of cocaine, especially the oleate, we have an admirable remedy, or palliative, in many of those cases which so often present themselves in young bridal couples at the hotels of our city. When the dyspareunia is due to simple hyperæsthesia and reflex spasm, a liberal employment of this preparation, followed within ten or fifteen minutes by a well directed effort on the part of the husband to realize and consummate his marital duty and privilege, will usually prove successful.

A physician of our city recently described to me his treatment of a case of this sort in this manner (the oleate used was of ten per cent. strength), and the result was perfectly satisfactory to all parties concerned.

If the hymen be exceptionally unyielding, so as to indicate a crucial incision, cocaine will of course be exceedingly appropriate as a local anæsthetic.

But I have already transgressed the limits which I had proposed for this paper, and will not longer weary you.

ART. IV.—Chronic Bright's Disease.* By W. R. WINCHESTER, M. D., Macon, Ga.

The scope of a paper of this character is necessarily very limited, while the literature of medicine has teemed with the subject, since the researches of Bright were published, in 1837, to the present day. To be brief, I will therefore,

*Read before the Macon Medical Society January 19th, 1886.

avoid theories, and attempt only a *practical* sketch of the disease.

For fifty years, with the improved appliances of chemistry and the microscope, pathologists have been closely investigating this disease. While much has been added to our knowledge, much yet remains unknown.

From the early theory that the urea was converted into albumen, numberless theories have been offered only to be sacrificed by facts as they have become established, till the present time, when no special theory is prominently advanced foreven some of the most important phenomena exhibited by the disease.

The lesions found in the kidneys of persons dying of chronic Bright's disease present three types, viz. :

1st. The large, smooth, and white kidney.

2d. The granular, contracted, red kidney.

3d. The lardaceous or waxy kidney.

In the first type (the large white), the organ is much enlarged, with the stellate patches of blood vessels on the smooth, white surface.

On section the cones are found of normal color, but appear red from contrast to the ivory-white of the cortical portion. The capsule is easily detached. The microscope reveals important changes in the uriniferous tubes. The epithelium is enormously increased, and the tubes are enlarged and distended with these epithelial elements.

In the second type (granular, contracted, red) the gland is reduced in size and weight. The capsule is adherent. The surface is covered with small rounded elevations. The microscope shows the uriniferous tubes shrunken and denuded of epithelium. Cysts are usually found, and may be visible to the naked eye.

In the third type (waxy) the kidney is usually enlarged, and smooth externally, and conspicuously tough and hard. The cut surfaces are bloodless and of a waxy appearance, which is characteristic of this type.

The distinct type of this disease cannot always be made out during life. The granular and the waxy may have in-

flammatory attacks, producing changes like those of the large white kidney. But each has its special clinical history.

It is claimed that two-thirds of the cases of chronic Bright's disease run an undiscovered course, and the deaths returned as from dropsy, convulsions, heart-disease, pneumonia, etc. It is more common with men than with women, and between the ages of forty and sixty.

The known causes of the disease are many, and the unknown ones are probably more. A large number of victims come from the indigent classes of our population, who are ill-fed, insufficiently clothed, and exposed to cold and wet, and, withal, try to supply these deficiencies by resorting to spirituous liquors. The latter alone ranks high among the causes, where the alcoholic is taken regularly daily and abused; and even malt liquors are not without danger when taken to excess.

Among the *antecedents* belong long-standing cystitis, stricture of the urethra, tuberculosis, gout, syphilis, struma, and chronic lead-poisoning. It may follow an acute attack (from cold or scarlet-fever) and frequent pregnancies.

With the large white kidney, there is general anasarca and serous effusions. The skin is pale and glossy. With this kidney, there is a proneness to inflammatory diseases and to uræmic poisoning. The urine is usually pale and scanty; the specific gravity is somewhat higher than normal, and contains a larger quantity of tube-casts. This form of the disease is often fatal in six months.

The granular, contracting, red kidney is chronic from the beginning. Dropsy is usually slight or absent. It generally attacks older people. The skin is pale and sallow. Subjects with this kidney have usually enlarged heart as a result of the disease. The ophthalmoscope shows changes in the retina. The urine is abundant and of low specific gravity. Hyaline and granular casts are usually found. Apoplexy as an accident is not uncommon.

The waxy kidney is usually associated with a liver and spleen similarly affected, and in persons run down by some other wasting disease. General dropsy is usually present.

Urine is abundant even before it becomes albuminous, and is commonly the first symptom to awaken suspicion. The tube-casts are usually hyaline.

Albuminuria is common to all three types but is not invariably present.

Chronic Bright's disease in the majority of instances comes on insidiously. The patient may have only a feeling of malaise, gradual loss of strength, a slight swelling of the ankles or under the eyes, frequent desire to urinate or slight dyspnœa, or the first warning may be some cerebral trouble.

The more prominent general symptoms usually found are digestive derangements, dropsy, anæmia, and hypertrophy of the left heart. The most invariable changes are those of the urine, and these, when persistent, may be termed almost pathognomonic. Headache, vomiting, diarrhœa, convulsions, and coma are incident to uræmic poisoning.

The usual course of the disease is marked by periods of exacerbations, by which it makes its advance. By some authorities these periods are considered acute attacks super-added.

The mode of death is various: slowly from exhaustion, by anæmia, oppressive dropsy, and gastric derangement—oftener during an exacerbation attended with high temperature. A large per cent. die from some form of uræmic poisoning, as convulsions and coma, or uncontrollable vomiting and diarrhœa. Others die from pleuritic effusion, ulcerations of the bowels, apoplexy, pneumonia, pericarditis, and other complications.

The duration of fatal cases is from six months to many years.

The blood in this disease is watery, deficient in albumen, and charged with an excess of excrementitious products resulting from the disintegration of tissue that are removed by the healthy kidney. Notably among these is urea in large quantity. It was formerly universally believed that the last was alone responsible for those phenomena we term uræmic poisoning. Beale states that he has seen severe uræmia with no urea in the blood. It is now accepted that these phenomena are due to the accumulation of certain

undefined excrementitious matters in the blood other than the urea.

We do not necessarily sound the death-knell of a patient when we tell him he has chronic Bright's disease. Unfavorable symptoms as to prognosis are continued dryness of skin and a feverish state; urine becoming scantier and its specific gravity not increasing *pari-passu*; large effusions in the serous cavities; excessive enlargement of the heart, and the phenomena of uræmic poisoning—especially renal asthma. Flint says, "the progress of the disease may be entirely arrested;" also that "it may exist indefinitely, provided the kidneys are not damaged to the extent of more than one-half, and the accessory conditions remain favorable."

To meet the indications for treatment we should first intercept the operating cause (as intoxicating drinks and exposure to wet and cold) to prevent further damage to the kidneys. Remove all unfavorable conditions surrounding the patient, clothe him in flannel, and let him avoid severe cold. Give him good, light, and nutritious diet—especially milk; vegetable bitters for his dyspepsia; iron to prevent, or to cure the anæmia; warm baths, followed by friction, to keep the skin active, and let him have moderate exercise. For the dropsy give hydragogue cathartics and diaphoretics. When uræmic symptoms begin to show themselves we must bend our efforts to eliminate the toxic principles by free purgation aided by free diaphoresis. Elaterium and pilocarpin would probably best meet these indications. Chloroform is to be used to control convulsions, and blood-letting is permissible in exceptional cases only.

ART. V.—**The Relation of Light to Sight.** By F. C. RILEY, M. D.,
New York.

Light is that force provided by nature for the purpose of illuminating our surroundings, and by means of which we are enabled to recognize the existence of objects as regards their relative position and general outward characteristics.

Light consists of two kinds, *natural*, or solar, and *artificial*. The *former* is supplied by the great luminous body of the planetary system to which our earth belongs, *i. e.*, the sun. *Artificial light* is generated by the processes of combustion of various and differing substances. Diffused sunlight possesses an acknowledged action for good regarding the general health of all animate bodies, as well as for illuminating purposes; but the same cannot be said of artificial light, as the products of combustion upon which it is dependent for its existence are often very deleterious in their action upon living organisms.

Notwithstanding the disadvantages of artificial as compared with solar light, it is essential in larger cities and towns, especially that it be depended upon for the necessary illumination for the fulfillment of the various exigencies of mankind. Obstructed from sunlight as are many of the offices and counting-rooms of every city in which the details of the various and complicated mercantile and commercial pursuits are transacted, artificial light of sufficient degree and suitable quality becomes imperative, if the eyes of the workers therein engaged are to be protected from future disability and disease.

Thousands of clergymen, lawyers, and other professional and studious people, are accustomed to do much of their work by the aid of artificial light. Nightly the city teams with myriads of its inhabitants in church, theatre, or concert hall, the illumination of which is necessarily entirely the result of human device.

The preservation of sight to this vast concourse of people is of importance to the community at large from a basis of business economics alone, not to mention feelings of sentiment and philanthropy.

The effect upon the organs of sight of the illumination used is of material import to the individual and to the community.

A full consideration of the influence of light upon the general health, especially as adapted to the illumination of public buildings, theatres, etc., belongs primarily to the domain of hygiene—being a kindred topic to that of heat and ventilation, all of which have an effect upon the eyes

through the system at large, if not more directly. Light is essential to the exigencies of human life, and upon its ability to meet different requirements under various circumstances depends much of the worldly success of individuals and communities; for upon the eye as much as upon any organ or set of organs is man dependent for the success of his undertakings, and non-sufficient illumination may be the direct cause of impairment, or, perhaps, total failure of sight, which shall establish an interruption of his labors and an indefinite suspension of his plans, and possibly their ultimate failure.

Any occupation requiring the use of the eyes with inadequate illumination can exercise but a baneful influence, as in an insufficiently lighted apartment the eye is seriously taxed to gain clear perceptions of objects.

Nature cannot be excelled by any device man has thus far consummated regarding the source of illumination—sunlight being the illuminating agent *par excellence*; and it should under no circumstances be discarded in favor of artificial light when it is possible to obtain it in sufficient quantity.

The days of candles, in this country at least, have passed, unless it be in a few exceptional localities.

Oil and gas are at present in general use, while electricity as an illuminating agent is but in its infancy. The methods to be employed for the illumination of individual departments depends, and largely, upon the variety and nature of the work to be done, and upon the condition of the eyes of the persons therein engaged. It is essential, however, that a sufficient amount of light be allowed to approximate as nearly as possible that of nature. Candles, at present so rarely in use for purposes other than artistic and decorative, need no discussion; although, when used in sufficient numbers, and when so placed as to afford the maximum amount of light with the minimum amount of heat, their illuminating effects are difficult to exceed by more modern inventions. Oil has superseded the use of candles to the almost complete exclusion of the latter for household purposes, and is now generally depended upon where gas is unobtainable. Lamps of apparently every conceivable pattern have been intro-

duced, each being represented as superior to all others by the makers.

In the selection of lamps, the following considerations should receive attention, provided their light is to be depended upon for practical illumination:—

First, the quantity of light emitted.

Second, the amount of light evolved.

Third, the situation in which it is to be placed.

Regarding the *first* consideration, it may be said that of two lamps emitting the same amount of light, the one which at the same time furnishes the least degree of heat is preferable.

When possible, the illumination of an apartment should be made equal to that of daylight, not as when the sun shines directly into it, but to such a degree as is found to exist in a north room on a sunshiny morning.

Provided such an amount of illumination cannot be obtained by one or two lamps, add to the number till the requisite degree of light is acquired. No source of artificial light should be adopted on account of its heat-producing power—apartments properly acquiring the requisite amount of heat from other sources, notwithstanding the frequency of the remark that it will be warm enough after the room is lighted.

Warmth so obtained is undesirable, as the atmosphere so tempered is deprived of its healthful and life-sustaining principles, and is thereby rendered unsuitable for the oxygenation of the blood. Some of the more recently introduced oil lamps are so arranged as to produce a very brilliant flame, at the same time providing for a commensurate deoxygenation of the atmosphere in consequence of the disproportionate amount of heat.

Such a lamp placed on a table about the level of the head of an individual, although affording a sufficient amount of light for most purposes, is a source of danger to the eyes on account of the great quantity of heat which is reflected directly into them.

The gas commonly in use in cities and large towns possesses some advantages over other illuminating agents, par-

ticularly as regards convenience of lighting and extinguishing. Smoke is not a noticeable product of its combustion, and when the quality and pressure is such as to favor a steady flame of sufficient power to illuminate to the required degree, it in many respects serves our purposes as well, if not better, than other methods of lighting. Electricity as a source of household illumination is at present beyond the reach of the majority, owing to the expense attending its generation and distribution; although it gives under certain conditions, the best light with, practically, a complete absence of heat, thus embodying the two most desirable and essential features. Doubtless the day will come when, in all more thickly populated districts at least, this method of lighting houses and apartments will be almost universal, as the demand for perfect illumination exists and will ultimately provide the means.

The location of the source of light, of whatever nature, is of importance, as upon the relative position of it and an individual exists a direct bearing upon the sight; also upon the ability of the eyes to tolerate the amount of work imposed upon them while dependent upon such illumination. When it is impossible to improve upon the provisions of nature for our emergencies, it is wise to imitate so far as it is practicable, as may be judged by results obtained. Natural light falls upon us and our surroundings from above, and it should be our aim, when considering the location of artificial means of illumination, to approximate as closely as possible this excellent arrangement of nature. An artist selects a studio in which the light enters by a window, at an elevation, and if to be illuminated artificially, this source is so arranged as to throw its light from above, and the same conditions should be sought in illuminating rooms for living purposes. Rooms should be thoroughly lighted in their entirety when occupied, to prevent a strain of the muscular apparatus known as the accommodative, which is otherwise involved in undue effort. The chandelier dependent from the centre of the ceiling does this, provided enough burners are lighted and such globes used as shall reflect it downwards to all parts. Where the capacity of the chandelier is insuffi-

cient, wall brackets are provided or a lamp or two in various positions can be relied upon to compensate for the deficiency.

The habit of sitting by a table to read or write with but a comparatively small space in the immediate vicinity illuminated, the rest of the room being in darkness, is a pernicious one, and should be discountenanced by all who have the integrity of their eyes at heart.

Insufficient illumination is the cause of many disorders of the eyes. A room used for reading and writing, such as the library or family sitting-room, should be wholly and completely illuminated in every part. Each individual should be so seated that the light of the lamp or gas jet in their immediate vicinity shall fall upon their work from above and from the left-hand side. The more light allowed, the more clearly are objects discerned, and the less fatigue the eyes undergo may be considered, in general, to be true.

Abolition of fatigue lessens the probability of a rebellion of nature at the duties upon her structures, and is as applicable to the organs of sight as to any other set of organs. It has become fashionable in recent years to use stand lamps, provided with an argand burner, the stand permitting the placing of the lamp according to the desire of the user. The burner generates considerable heat, and is in this respect injurious, although it emits a much more steady and brilliant flame than does the ordinary burner, both of which latter attributes are very desirable. Such a light is not of itself ordinarily sufficient for the illumination of a room, especially if protected with a heavy porcelain shade, as is customary; and to enable one to see clearly to remote parts of the room, the burners on the chandelier should be lighted at the same time. The practice of covering globes with various fancy shades, although adding much to the æsthetic effect, diminishes materially the amount of light emitted, and, when this is depended upon for its illuminating power, should be discountenanced.

Colored globes also absorb a large quantity of light, and, at the same time, tint that which is transmitted, and cause an indistinctness of objects in consequence. The effect of heat upon the eyes from the source of illumination is to pro-

duce a too rapid evaporation of the tears, whose function it is to keep the eyeball constantly moist. The emanation of considerable heat from a source in close proximity to the head when the eyes are actively engaged produces in them a sense of dryness and irritability which is not only painful, but harmful, often resulting in headache and a general sense of exhaustion of the faculties.

Heat and light are similarly reflected, and as we read by the aid of the rays of light reflected from the open page before us, our eyes become heated by their contact. If, however, the source of illumination is sufficiently removed to permit of the rays of light to come to us in sufficient quantity to insure clear visual perceptions but, as it were, somewhat cooled in by their passage through the intervening atmosphere, the latter danger is in a measure averted. Persistent irritation of the surface of the eye-ball, or a constant straining of the perceptive visual faculties while engaged in reading, writing, and kindred pursuits, often leads to disastrous consequences. To the near-sighted eye, especially, is it injurious, as the already existing abnormality can be thereby increased and other derangements established, which may result in its complete destruction.

Artificial light, in order not to become a source of evil to the eyes, must be of sufficient brilliancy to permit of, and insure a clear perception of all objects; and the nearer its quality approximates that of solar light, the better is it adapted for general use. The annoyances attendant upon the refractive errors in general become greatly augmented when the eyes are used under conditions of faulty illumination, and it is often under such circumstances that an intimation of something wrong is first brought to notice. With the existence of refractive errors, certainly as perfect an illumination is required as it is possible to obtain; for with such abnormalities existing, the eyes undergo more strain as compared with the normal or emmetropic eye—even though glasses be worn to correct the optical defect. Both the far-sighted and the old-sighted or hypermetropic and presbyopic eyes respectively require the complete illumination of objects in order to avoid the evil tendency to an increase of the al-

ready existing difficulty. Pain in and about the eyes is often due to such provocations as non-corrected optical deficiencies, plus inadequate illumination for complete and easy visual perception.

The eye of man is an organ that is in constant and unintermitting activity during the waking hours, and the preservation of its functions is of supreme importance for the welfare of the individual. The evil consequences of wanton or inattentive neglect of nature's laws, in any respect, are seldom so distressingly manifested as when involving the sense of sight. This special sense is considered by many as desirable as life itself, yet how many there are that habitually and grossly abuse this most wonderful of organs, the eye, regardless of the delicacy of its structure and the finished perfection of its functions—heedless, in fact, of the calamity its slight impairment even often entails.

105 *Madison Ave.*

Clinical Reports.

Puerperal Dropsy of Uterus. By B. C. KEISTER, M. D., South Boston, Va.

On the 26th of last August I was summoned ten miles in the country to see a lady who was eight-and-a-half months advanced in pregnancy, and at the same time suffering intensely with that great complication known as renal dropsy, accompanied with albuminuria. The dropsical effusion was of a general form, and had penetrated the whole body. The patient's eyes were almost entirely closed, and her feet and hands were so much swollen that she could hardly move her toes and fingers. The patient was unable to turn herself in bed without assistance, and had been in this condition for nearly one whole week.

Her attending physician, who saw her on the previous day, advised her to let nature take its course, thinking she would go to term, which was about two weeks off. The Doctor was, doubtless, conscientious in his belief and advice, and I

do not mean to reflect in the least degree upon his skill or reputation when I say that, in my judgment, the patient would not have survived twenty-four hours longer had she not been relieved that evening.

One may well imagine the embarrassment under which I had to labor when I was told by the husband of the patient that it was eight miles to any doctor's home, and the evening was already growing dark, while the poor woman was lying before me in great agony.

After a thorough examination of the patient, I decided that the only means of relief at my disposal consisted in inducing premature labor, and that as early as possible; for the patient was rapidly sinking from exhaustion. Her respirations were 38 per minute and pulse 121, and very feeble.

After reflection on the gravity of the case, I informed the husband that the removal of the child would be attended with some risk to both mother and child, even if the child *in utero* were living; but I could not discern the slightest trace of the foetal heart sound after repeated examinations with the stethoscope. But owing to the excessive dropsical effusion, I did not rely on the absence of the foetal heart sound as sufficient evidence to decide that the child was dead. The child was dead, nevertheless; but I did not know it until after I had dilated the womb sufficiently to allow the escape of a considerable quantity of water, which contained small particles of hair and epidermis.

I succeeded in dilating the uterus with my fingers and hand sufficiently large to allow the head of the foetus to descend. I administered fifteen drops of Squibb's fluid extract of ergot and waited half an hour for results, but the desired results did not come. I then repeated the dose, but it did not seem to have any effect upon the seemingly dead uterus. I then introduced my left-hand into the already dilated os, and with my right on the lower portion of the abdomen, succeeded in pushing the head of the foetus upwards and away from the mouth of the womb. At this instant a gush of water came forth that would have filled a two gallon bucket. A few moments later the dead foetus was born, accompanied with the placenta and another gush of water. I do not exaggerate when I say there was no less than six gallons of water that flowed from this woman's womb during and immediately after this delivery.

The question will be asked, where did all this water come from, and how did it reach this point? I leave this question open for discussion, and will be glad to hear from some

brother on this subject. I will add that the child was not fully developed, notwithstanding it had been a little over eight-and-a-half months since the mother's last menstrual period. This may be accounted for by the long period the fœtus remained "in utero" after its death. Large fragments of skin were hanging about the body, and the hair would slip off the head with the slightest amount of pressure.

I remained with the patient until 9 o'clock the next morning, leaving her comparatively comfortable. I procured a specimen of her urine before leaving, and when I reached my office I examined it at once, and found it heavy laden with albumen. I saw her the next evening and put her on a regular course of treatment for both the dropsy and the albuminuria. Among the diuretics, I obtained the best results from iodide of potassium and digitalis, given at proper intervals. For the albuminuria and accompanying anæmia, I prescribed iron and cod-liver oil; also daily tepid baths and suitable diet, avoiding all albuminous food.

The dropsy entirely disappeared in three weeks, but leaving a small trace of albumen in the urine. I directed the husband to bring a fresh specimen of his wife's urine to my office once every week for three weeks longer, which he did very promptly, and at the expiration of the seventh week from delivery, the patient, accompanied by her husband, came to my office, apparently in good health. I prescribed the following:

R_y. Ferri redacti gr. xv.
 Magnes. sulph..... ʒij.
 Potass. bicarb..... ʒij.
 Infus. buchue..... ʒviij.

M. Sig.—Tablespoonful once daily in a wineglassful of water.

I have not seen her since, but her husband called at my office several months afterwards and stated to me that his wife was entirely well and enjoying better health than she had enjoyed for more than two years.

Three weeks ago I was called to another case very much akin to the one mentioned—a primipara 19 years of age. When I reached her house she was in labor. After a tedious labor of seven hours I delivered her of a well-matured child without anæsthesia.

The dropsy was of an anasarcal character, and lasted a little longer than two weeks. All the limbs were swollen nearly double their natural size. The larynx and neck were:

so badly swollen that it was very difficult for the patient to breathe. I prescribed the following mixture:

Ry. Tinct. scillæ.....5vj.
 Syr. ferri iodid.....5j.
 Inf. digitalis.....ad. 3iv.

M. Sig.—Teaspoonful every three hours in a wineglassful of water.

This acted like a charm in reducing the dropsical effusion, which passed off through the kidneys, causing the patient to micturate every three-quarters of an hour for the first two days. The uterus in this case, unlike that in the case above mentioned, contained no effusion of serum, nor was there any trace of albumen in the urine beyond the normal. I dismissed this case last week, and I consider her about well, so far as her dropsy is concerned.

Cases like this latter are often met with by the general practitioner, but I have seen no account of a similar case to the former, where the dropsical effusions penetrated the cavity of the uterus to such an alarming extent. We often meet with dropsy of the fœtus, and I am of the opinion that the effusion of serum which was found in this patient's uterus was carried there through the placental circulation. The fœtus, although having been dead some time, presented traces of ascites.

Carnrick's Soluble Food.

Dr. C. F. Denny, of St. Paul, writes to the *Northwestern Lancet*: "Not long since I had brought to me a child of six months, suffering from the following symptoms: Constipation, at times irregular action of bowels, regurgitation of food and an asthmatic cough. Its mouth was full of thrush sores, and its appearance one of poor nourishment. It had been given a number of Infant's Foods in vain. By means of mild medication, directed towards the cough and stomach, something was accomplished. Finally I gave 'Carnrick's Soluble Food,' and had the satisfaction of having it retained, and at last accounts the child was doing nicely. I am inclined to think this food is worthy of attention on the part of the profession. It recommends itself in that it contains caseine, rendered soluble by pancreatine, starch converted into dextrine and maltose."

Correspondence.

Medico-Legal Case—Albino-Birth—Is it White or Black?

Mr. Editor,—At a recent term of the Corporation Court of this city, a case involving legal medicine occurred of sufficient interest to justify a short account of it.

William H. Brothers and Sarah E. Brothers, both negroes, were married some years ago and are the parents of two children, a boy and a girl. On November 4th, 1883, after many quarrels, they parted, and in April, 1884, Sarah E. Brothers obtained a decree of absolute divorce against her husband, Wm. H. Brothers, and the chancellor gave to her, the plaintiff, the custody of the children, and imposed upon her the care of their property, consisting of some city real estate.

On August 6th, 1884, nine months and two days after last opportunity of access, Sarah Brothers was delivered of a white child. Becoming aware of this fact, Wm. H. Brothers entered a petition before the court to have his two children removed from the custody of their mother and their property remanded to other care, alleging that the fact that her child was white was sufficient proof that he, a negro, was not the father of the child, and therefore proof of the adultery of the mother. She resisted the petition, declaring that the child was the offspring of the petitioner and an albino. After the case had been in court many months, the chancellor declined to decide the parentage of the child, and a jury was called to determine "Whether W. H. Brothers is the father of the child of Sarah E. Brothers, born on August 6th, 1884."

On the trial the child was produced in court; opportunity of access was proven as late as the 4th of the November preceding, the motherhood was proved, and I was called upon to testify as to the race.

I found a child of skin as white as pearl—glistening, smoothe and very thin—hair woolly but perfectly white, eyes light gray with pinkish pupils, oscillating continually, nose flat and thoroughly African, head heavily developed behind, low forehead, rather rounded, lips thin. I had there-

fore no hesitation in declaring the child to be an albino. Then came the question is it a negro or mulatto albino? I concluded that the "kinky" wool and flat nose were sufficiently marked to demand the opinion that it was not a mulatto; but what was I to do with those thin lips? At last I concluded that the thinness of lip was probably due to atavism or the reversion to strain, and that possibly there was a trace of white blood somewhere in one or other of the parents. The mother was pointed out to me, and I thought I could see that she was not a full-blooded negro. The two undoubted children of the contestants were now presented in court, and I was pleased to find both of them the possessors of thin lips. Wm. H. Brothers was shown to me, and I found he had the same sort of lips, and undoubtedly had white blood in his veins. I had seen the child before, but never any other member of the family. I pointed out each feature to the jury and discussed it before them, and called their attention to the lips as the only feature which prevented me from asserting that the child was a full-blooded negro, and then pointed to the lips of the other members of the family.

After argument, the jury retired and soon returned with the verdict, "We, the jury, find that W. H. Brothers is the father of the child of Sarah E. Brothers, born on August 6th, 1884."

WM. A. THOM, JR., M. D.

Norfolk, Va., May 31st, 1886.

Sassafras Oil—Information Wanted.

Mr. Editor,—I noticed in the January and February numbers of the *Medical Monthly*, an article by Dr. Miller, also one by Dr. Bartlett, on the oil of sassafras. Dr. Miller gives his experience in a few cases with this drug, but does not fully explain the physiological effect. He gives drachm doses at intervals of two hours, but does not say how long it can be continued.

Dr. Bartlett gives his experience on mice, and explains the physiological effects, but does not say anything of its use in his practice, or whether he has prescribed it at all. He compares it to opium, strychnia and ergot, in its effect on mice, but fails to say if it affects human beings the same way. Now, I am anxious to know the dose of the drug, its full physiological effect, and how often repeated, and in what class of diseases it is to be used. Possibly some of the readers of the *Virginia Medical Monthly* can answer this satisfactorily. I have failed to see anything in regard to it in the books.

Yours, F. M. HALLETT, M. D.

Duncansby, Miss., June 4th, 1886.

Proceedings of Societies, Boards, etc.

RICHMOND MEDICAL AND SURGICAL SOCIETY.

June 8th, 1886.—Dr. John G. Skelton, *President*, in the chair; Dr. M. D. Hoge, Jr., *Secretary*.

Puerperal Fever.

This being the subject for discussion, the Leader, Dr. Hugh M. Taylor, said that few subjects had received a greater share of professional thought, and few had had more space allotted to it in the current literature of the day. In 1874, Dr. Fordyce Barker estimated (*Diseases of Puerperal System*) that twenty thousand pages had been written upon the subject of puerperal fever, and Dr. Taylor supposed in the twelve years since, that number had been doubled. Barker also tells us that the Paris Academy of Medicine discussed this subject for seventeen consecutive meetings. Nor should we wonder at the interest it attracts when we recall the fact that it destroys more people than either small-pox or cholera. Dr. Taylor said such was the nature of the subject, that he would limit his remarks to the

Causes of Puerperal Fever.

Upon our theory of its cause must we base our treatment—curative and preventive. If we accept the conclusions of those who regard it as a distinct and separate type of fever

—a zymosis-like typhus, typhoid and scarlet fever—it would be as irrational by specific treatment to try to abort it as it would by specific means to try and cut short such self-limited diseases as scarlet fever, measles, etc.; in such cases the preventive treatment is in the highest sense important. If, on the other hand, we look upon it as a septic infection, a septicæmia or pyæmia from septic inoculation of wounds, then, beyond question, the principles of antiseptic surgery as they are variously understood and promulgated by the lights in our profession must be adopted in all of their minutest details in obstetrical practice. If, again, we view it in the light of those who think the cause is of a multiple nature, that in one case it may be caused by a zymotic poison like that of scarlet fever, etc., in another by infectious materials or poison generated by crowding badly constructed hospitals, nosocomial malaria, hospitalism, and in another by direct infection of wounds in the utero-vaginal tract by septic matter carried by fingers, instruments, etc, then it is easy to see that our treatment must vary with our acceptance of its cause. But it is no easy matter to decide upon which of these theories to base our practice. On each side we find an array of talent, argument and statistics—very convincing when only viewed from one stand-point, but equally confusing when viewed from all. This great diversity of opinion is to be regretted, as the current of professional thought and action is in a great measure directed by the teachings of a few recognized authorities.

Dr. Taylor thinks the discussion can be limited (1) to the similarity to zymotic specific fevers; (2) The unity of the poison and its identity with surgical septicæmia and pyæmia; (1) To the multiple nature of the poison which engenders in puerperal women puerperal fever. He thinks we can claim, without fear of controversy, that puerperal fever is some form of blood-poison. What this poison is, how it is generated and how admitted into the system, is the subject of dispute.

These points of controversy have recently had renewed interest vested in them in consequence of a paper read by Dr. T. G. Thomas, in which he took strong grounds in favor of, and defended in his usual masterly manner, the theory of the unity of the poison, the identity of puerperal fever with puerperal septicæmia and surgical septicæmia, and its uniform admission into the system through wounds of the utero-vaginal tract. Dr. Thomas claims* “that his observations

**New York Med. Jour.*, Jan. 1st, 1886.

have led him to adopt the views of those who believe that puerperal fever is puerperal septicæmia. It matters not whether it assumes the form of metritis, peritonitis, cellulitis or lymphangitis, the essence of this disease is a poison which is absorbed into the blood of the parturient woman, through some solution of continuity, and which in the appropriate soil of the puerperal condition fructifies and produces the result known in its ensemble of pathological phenomena as puerperal fever."

As opposing this solution of this much vexed question, Dr. Fordyce Barker refuses to repudiate his views expressed in his work on Puerperal Diseases, and declares his opinion as follows: "In puerperal fevers, as met with in private practice, we have to treat the consequences of some form of blood-poisoning. This may or may not be septic poisoning. In private practice I think it generally due to some occult, possibly epidemic influence in hospital patients, nosocomial malaria, often associated with septic poisoning. My creed is fully avowed in my book, p. 476, and unless in the future I learn new facts and new arguments to change my faith, I shall die impenitent."

Just here Dr. Taylor mentioned a paper written by Dr. Barker several years ago, calling attention to malarial puerperal fever, and also to one by Dr. O. F. Manson, who wrote of the influence of malaria upon puerperal women twenty-five years ago as a cause of puerperal fever, and Dr. Parvin had urged that there were "heroes before Agamemnon."

Lusk is quoted as claiming in his *System of Midwifery*, that "It has never passed beyond the domain of dispute that puerperal fever is an infectious disease, due, as a rule, to the septic inoculation of the wounds, which result from the separation of the decidua and the passage of the child through the genital canal in the act of parturition." This same writer mentions the occurrence of puerperal fever in parturient patients before confinement, and says, "Though the argument is very strong in favor of regarding the genitalia of puerperal women as the exclusive point of entry of infectious materials into the system, it seems impossible at the present time to make all the facts coincide with such a theory." And again this same writer is quoted as saying in his contributions to Pepper's *System of Medicine*, vol. I, pp. 1,003, "That it will not do to ignore the fact that the conditions which prevail in the parturient canal subsequent to labor have no strict analogue in the lesions which the surgeon is called upon to treat, and that therefore a complete

identity as to all the clinical features of puerperal and surgical fever would hardly be within the range of possibility." He also thinks "that the deleterious materials may find other channels for entering the system than wounded surfaces, but is not willing to go as far as Tarnier, who concludes that it is probable that the lungs, by their extent and activity, offer conditions most favorable to abortion, and that it is often, if not always, by them that poisoning occurs." But Lusk thinks "it is not yet time to give up the idea that under exceptional circumstances the respiratory and digestive tract may allow the passage of materials of a septic character." Playfair in his *System of Midwifery* denies that puerperal fever is ever dependent upon a miasm in hospitals, and concludes (pp 590): "The more closely the history of these outbreaks in hospitals is studied the more apparent does it become that it is not miasm, but the conveyance of septic matter from one patient to another." He thinks "there is no sufficient ground for believing that the disease is ever epidemic in the strict sense of the word." He admits "the plausibility of the theory of an essential zymotic fever, but thinks it is not sustained," and concludes that the theory of its identity with surgical septicæmia is the best that has been advanced." It will be seen that Playfair's views coincide with those expressed by Dr. Thomas, and also those advanced by Dr. Geo. T. Harrison in his paper before the last meeting of the Medical Society of Virginia.

Dr. Schuyler, of New York, in discussing Dr. Thomas' paper, expressed the conviction that the "puerperal woman is subject (I.) to the effect of a special contagium, whose action, which is zymotic rather than septic, is upon and through her predisposed generative tract, and which attacks her irrespectively of whether such tract has or has not been lacerated or abraded as a result of parturition. (II.) That she is liable to puerperal septicæmia as a result of the absorption of septic material—the absorption being in this case the primary step in the morbid condition known as puerperal fever or puerperal septicæmia."

Dr. Paul F. Mundé in the revised edition of Cazeaux and Tarnier's *Obstetrics*, makes the following comments:

"I believe puerperal fever is puerperal septicæmia, the septic infection coming usually from without, carried generally by the fingers, instruments dressings, etc., and no doubt at times in the clothing or on the person of the attendant, but in exceptional cases transmitted through the medium of the atmosphere." He has not been able to "divest himself en-

tirely of the belief that puerperal fever is sometimes a zymotic disease *sui generis*, that it is a disease produced by a septic poison of its own, but he thinks this is of the rarest exception." Further, his experience has taught that in many cases the septic infection may be thrown off and the symptoms continue; the febrile condition will then be found to be due to some peri-uterine inflammatory process. In regard to the part that bacteria play in the production of puerperal fever, he says: "I do not propose to discuss the question of the relation of bacteria in the production of puerperal fever since I cannot but consider the whole subject of bacteriology as in its infancy and so unsettled as to leave it a matter of doubt whether in the majority of infectious diseases, the bacteria produce the disease or the disease generates the bacteria." That the exanthemata produce this fever he does not believe.

Dr. Taylor did not see fit to enter into a discussion as to the merits of the different theories, and he thought dogmatic assertions from mere tyroes in the face of the fact that giant intellects were trying to elaborate this subject without a solution, was the highth of presumption. He reported the following cases, occurring, all of them, in private practice. He had never had an opportunity to study this fever in hospital practice;

Case 1 was a primipara who had had in every respect a normal and easy twin delivery. She did well until the sixth or eighth day, when a chill ushered in a well-marked, but not fatal case, of puerperal fever. Scarlet fever was at the time prevailing in the neighborhood, and her own physician had been visiting her just before confinement, and declined to attend her because at the time he was attending cases of scarlet fever. He thinks the poison in this case was zymotic like that of scarlet fever.

Case 2 was a young negro woman, to whom he was called to help deliver part of the placenta, part of it having been torn away by the midwife. The uterus was so much shut down that he could not tell whether or not he got all of it away. In spite of ergot and quinine to provide against such a contingency, puerperal fever developed, resulting in the formation of numerous metastatic abscesses and death. Some of the abscesses were enormous in size. As fast as one was opened and drained, another would form. As the abscesses were principally in the groin and axillary space, he thought the case one of puerperal septicæmia from absorption of septic matter by the lymphatic system.

Case 3 was confined under the best hygienic surroundings, but had a difficult instrumental delivery, and in four or five days developed puerperal metritis, or peritonitis, or both, and died. He looked upon this case as one of a zymotic nature, as erysipelas of a fatal character attacked the infant a few days after the mother's death. As far as could be ascertained, no infection could have come through the physician, and the nurse had not been nursing for many months, and only nursed this case because of her interest in the patient.

Case 4 occurred last Summer in a primipara. She was delivered without trouble by a midwife. Four or five days afterwards Dr. Taylor was called in, and found her with high fever and tender, distended belly. When he asked about her labor and after-treatment, he was informed that the midwife used a vaginal injection every day, and used a syringe, which she brought with her in her obstetrical bag. He knew that the midwife was at that time attending a bad case of puerperal fever, and thought it probable that she used the same syringe in all of her cases. He consequently concluded that this was a case of puerperal fever from septic infection through the midwife and her syringe.

Case 5 was also attended by this same midwife soon after the date of *Case 4*. In about two weeks he was called to see her and found her suffering from a mild form of puerperal fever. It presented a close resemblance to typhoid fever, and was only distinguished from that disease by irregular chills. He could assign no cause for the occurrence of fever in this case, except upon the ground of contagion through a midwife who had recently attended other cases of puerperal fever.

His experience and study led him to the following conclusions:

1. It is possible for the poison of scarlet fever, diphtheria, erysipelas, etc., to be ingrafted upon the puerperal woman whose system is shocked and depressed by the phenomena of labor, and produce in her puerperal fever.

2. That malaria may lay dormant in the puerperal woman and be rekindled into puerperal malarial fever by the shock and depression of labor, just as we see malaria cropping out after the shock of an injury or surgical operation.

3. It is more than possible that the bad hygienic conditions incident to crowding together of many patients—surgical, obstetrical or gynaecological—may bring about a septic atmospheric condition, which will poison the system of the

puerperal as well as the non-puerperal patient and attendant.

4. There can be no question of the fact that the injured utero-vaginal tract and placental surface may be contaminated by septic matter of any nature transplanted from one patient to another by sponges, catheters, fingers, etc., resulting in septic inoculation and puerperal septicæmia and pyæmia; but that this last is the only channel of infection he is by no means willing to admit; and honestly, he does not want to admit it, as he should feel stinging remorse if he could believe that the cases he has seen suffer and die were due to some such preventable cause.

June 22. The subject of PUERPERAL SEPTICÆMIA being continued over to this evening, Dr. Z. B. Herndon open with a paper on the

Pathology and Diagnosis of Puerperal Septicæmia.

Dr. Herndon said that the great want of uniformity in *lesions* causes great diversity of opinion of the pathology of this disease. Some regard it as local disease; others as constitutional, making the blood responsible for its existence. It has been denominated—

(1) Uterine inflammation of an erysipelatous nature. (2) Erysipelatous peritonitis. (3) Peritonitis. (4) Fever of a peculiar nature. (5) Disorder of a putrid character. (6) Abdominal inflammation. (7) Omental inflammation. Some authors contend that this trouble is identical with scarlet fever, erysipelas or typhus fever. That is, that puerperal septicæmia is the offspring of a common zymotic poison, because—(1) These diseases prevail largely during the same conditions of atmosphere; (2) Infants of puerperal women are extremely prone to erysipelas, and even husbands have been affected; (3) The fever has been carried by infection from patients with erysipelas and typhus.

Injury to the uterus or soft parts is likewise a cause. Those who contend that it is not infectious say that, when hospitals have been heated to a high degree for days, the disease has disappeared, when it should have been communicated by the doctors, who had not been subjected to such purification.

As to the *pathological changes* which have been observed, more or less gangrenous inflammation is found within the uterus, with sloughing of dead tissue, and consequently deep ulcers, and the organ becomes friable. When the inflammation has been croupous and has affected the vagina, we find areas of necrosis, gangrene and ulceration, with or

without either of those forms of inflammation. There may be uterine thrombosis, purulent inflammation of the veins, or suppuration and abscess of the uterine walls in consequence of the circulation in the blood of the septic element, abscesses in various other organs, as the spleen, lung, joints, etc. Ulceration has been found in the heart, stomach and bowels. Micrococci are present in the inflamed tissue, lymph vessels of the uterus, peritoneal exudations and pyæmic abscesses; and to their presence may be due the condition of the tissues just described, as well as the general constitutional infection. The blood is dark, deficient in fibrin, and does not congregate. *Pus* is sometimes found in the veins, liver and pleuræ, as well as in the peritoneal cavity.

In regard to the diagnosis, puerperal septicæmia is distinguished from *malarial fever* attending parturition by the specific effects of *quinine* upon the latter disease. From *ephemeral fever*, in which a profuse perspiration is followed by an abatement of the symptoms, and in which the fever is of shorter duration, and the breasts do not become flacid. From *metritis*, by the pain being more severe—oftentimes the bed-clothes being unbearable in puerperal fever, whereas in metritis we have to press down upon the uterus before pain is elicited. *Afterpains* and *hysteria* may simulate this disease; but the advent of pain in puerperal fever being several days after birth, with high pulse, absence of contraction of the uterus, failure of opiates to relieve, and increased constitutional disturbance, together with increased tenderness over the hypogastrium, make the diagnosis clear, if we remember that afterpains occur soon after delivery, and co-exist with uterine contractions, do not quicken the pulse, and are remedied by opiates.

In *malignant adynamic puerperal fever* the symptoms sometimes appear *during gestation*; sometimes during labor. The pulse soon becomes feeble and rapid, accompanied by delirium. Depression, nausea and despondency are followed by vomiting of a dark coffee-ground material. A clammy perspiration covers the body; there is great abdominal distension, and sometimes rigors. The breath has a pyæmic odor; the lochia and milk secretion may or may not be suppressed. The tongue is dry and brown; sometimes clean. The heart's action is interfered with mechanically, and pneumonia or pleurisy, or pericardial effusion may terminate life when exhaustion does not.

Dr. C. W. P. Brock next read a paper on the
Treatment of Puerperal Septicæmia.

He premised his remarks by saying that the theory entertained by each practitioner as to the nature of the disease must be his guide very largely in the treatment. He alluded, at some length, to the *preventive* treatment, and expressed the hope that when antiseptic midwifery becomes the universal practice, puerperal septicæmia would be almost an unknown disease. He quoted from recent utterances of Dr. T. Gaillard Thomas, to whom he alluded as "first among the foremost," as authority upon this and kindred subjects. Dr. Thomas says if he "were called upon to sum up the treatment of a *declared, undoubted* case of puerperal septicæmia, marked by the usual symptoms of pulse of 120, temperature 105° or 106°, which would meet the requirements of our time, I should give it categorically thus: (1). Quiet all pain by morphine hypodermically. (2). Wash out the uterine cavity with antiseptics. (3). Lower the temperature below 100° by the aid of running water applied to the abdomen. (4). Feed the patient on milk and nothing else, unless some good reason existed for changing it. (5). Exclude from her room all except the nurse and the doctor; keeping her as quiet as possible."

Dr. Brock did not advise antiseptic injections in every case of child birth, but only when made necessary by a reasonable fear of the introduction of some contagious or poisonous element into the parts laid bare between the fundus uteri and the vulva. These injections should always be given by the doctor, and never entrusted to the ordinary nurse. The doctor discussed the relative value of disinfectants, and advised the use of corrosive sublimate; 1 to 1,000 for disinfecting the hands, the internal genitals, instruments, napkins, &c., and 1 to 5,000 for irrigating the uterus and vagina. Absolute cleanliness cannot, by any possibility, do harm, and should always be practiced.

The food should be milk, beef-tea, meat-juice, eggs, etc., or such as would afford the largest amount of nourishment with the least tax on digestion. The marked tendency to prostration demands that brandy or whiskey be given, the quantity to be regulated by the demands of the case. Such medicines as lessen the force of the circulation without favoring exhaustion, and reduces the temperature are indicated. Norwood's tincture of veratrum viride, five drops hourly till the pulse is reduced below 100, and then three or four drops every second hour, or the tincture of aconite root, one

drop every hour, may be used with good effect to accomplish the above result; but neither should be given if prostration be very great. Quinine, salicylic acid, salicylate of soda, etc., may be used to reduce temperature, but if the stomach be irritable they should be used by the rectum or by inunction. Turpentine stupes to the abdominal wall frequently act admirably, and I have never seen any bad effects from them on the kidneys or otherwise. Morphine, to allay pain, is a remedy that can never be omitted, but must be used with great care. Cold applied by the rubber coil containing running water is the most efficient means we possess for reducing temperature, and should be used in every case.

The use of muriated tincture of iron and other remedies were referred to and their uses inculcated in certain conditions, especially when the disease becomes chronic.

If the germ theory of disease be untrue, certainly no obstetrician can object to strict cleanliness, or the avoidance of everything that can by any possibility produce puerperal septicæmia.

During the discussion which followed the reading of these papers,

Dr. Thos. J. Moore expressed regret that after so much had been written upon this subject for the past forty years, we were no nearer the solution of the question as to the real cause of this disease. It may be said there were two schools of opinion upon this subject, the one declaring the poison to arise from the decomposition of animal matter, and the excretion of the lying-in woman; the other believing that special vegetable organisms (bacteria) in some way bring it about, either by conveying the special contagium, or producing it by their own physiological powers, after entering the system, so acting upon the blood, organs, and secretions as to give rise to it. Without absolutely accepting the views advanced by either school, he was induced to favor the ideas entertained by the first mentioned. This variance of opinion prevented the adoption of a definite and proper line of treatment. The Doctor dwelt, at some length, on a review of the teachings of Drs. Jas. Y. Simpson, Thomas, Emmet, Flint, Koch, and confreres of the German school. He believed that erysipelas, scarlet fever, diphtheria, decomposing human bodies, and unhealthy wounds, all contained some principle that, under favorable circumstances, could give rise to puerperal fever. He feared that physicians quite often conveyed, from neglect of cleanliness, the specific poison to women in

their practice. He referred to the case of Dr. Rutter, of Philadelphia, cited by Meigs, who while laboring under *specific ozæna* produced an epidemic among his lying-in women, having in the end to abandon that line of practice. He believes that the majority of cures arises from auto-infection, and that the solution of continuity occurring during the process of delivery afforded ample opportunity for the absorption of the poison. The lymph spaces, lymph ducts, and sinuses were other routes through which it could travel. The pathological changes found after death were described. While no one of them is always to be found, yet, as a rule, a sufficient number of them exist to verify the diagnosis. Quite a number of other diseases exhibit more or less variance as to the lesions which accompany the constitutional symptoms. The changes found in pneumonia, typhoid fever, and scarlet fever were by no means constant or identical.

He preferred Norwood's tincture of *veratrum viride*, five drops hourly, until the frequency of pulse was reduced; then diminish the dose and lengthen the intervals of administration. Tincture of aconite root in one drop doses hourly until the desired effect is attained is likewise a good remedy. Where the temperature runs high apply the ice cap to the head, and if necessary, cold applied over the abdomen by cloths or rubber coil answers a good purpose. Quinine in large doses for reduction of temperature sometimes becomes necessary. Salicylate of soda was strongly urged by not a few writers. Turpentine applied as stupes and administered internally in 15 to 20 drop doses when indicated where there is a tendency to the formation and retention of gas in the intestines, often serves a good purpose. Where the peritoneum is involved, opium in some form is necessary. Its administration hypodermically, is to be preferred. It must be gradually administered in doses sufficient to control pain. He thinks cleanliness upon the part of the accoucheur, nurse, and other attendants; cleanliness in all of its details—rigid cleanliness—is to be observed. The vaginal canal must be syringed two or more times daily, and the uterus likewise, if any portion of the succedanea or decomposing material was retained therein—carbolic acid, chloral, bi-chloride of mercury, Condry's disinfectant fluid, and other kindred drugs possessing the power of arresting animal decomposition—some one of these should be used in the vaginal and uterine douches.

Dr. Landon B. Edwards thought that in the present state

of the literature on the subject, there was confusion arising from want of definiteness of description of diseases grouped under the one head of puerperal septicæmia. The duty of the student of this day is to systematize the records of cases, and point out a correct differential diagnosis. He thought that the essential nature of the causative element varied in different cases, hence the contrariety of descriptions of the clinical aspects of the septicæmia, and the variance of published opinions. In many cases it is plain what has been termed puerperal septicæmia, or peritonitis, or fever, is nothing more nor less than traumatic fever; and that there is also a special form of septicæmia peculiar to puerperal women. He thinks that a careful analysis of cases would show that there is a disease affecting puerperal women which arises only from absolute contact of septic poison, as from the hands of surgeons, accoucheurs, midwives, etc., who have recently been dealing with patients septically infected; in other words, he thinks we must adopt the views of Semelweis with very slight modifications. He thought the time would soon come when it will be a matter of conscience with the surgeon in active practice of his art that he should not attend a case of labor, especially if he has recently dealt with a case of abdominal surgery.

Dr. M. A. Rust is a strong believer in the theory that the disease is due to "chain micrococci," and possibly other forms of bacteria. Three per cent. solutions of carbolic acid, and 1 to 10,000ths solution of corrosive sublimate, are efficacious in resisting the introduction of such bacteria into the system, and are safe applications to the denuded surfaces through which the bacteria may enter. When such weak solutions as these manifest any toxic action, it may be safely inferred that there was some derangement of the kidneys.

Dr. J. F. Winn detailed a case of puerperal fever in a primipara which he had successfully treated with quinine, opium, and poultices.

Subject for next meeting:—Therapeutics of Cocaine—Dr. M. D. Hoge, Jr., Leader.

Peacock's Bromides.

G. T. VanCleve, M. D., of Mulden, Mo., says:—"I used Peacock's Bromides in a case of meningitis when everything else had failed, and the result was splendid, the child recovering under the use of *it alone*."

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Stated meeting, *March 25th*, 1886.—The President, Dr. J. C. Wilson, in the chair; recorder, Dr. W. S. Hughes.

Intra-Cranial Hæmorrhage—Record and Classification of 143 Consecutive Fatal Cases Observed in Medico-Legal Practice and in Private Autopsies in the City of Philadelphia—Practical Deductions.

Dr. H. F. Formad remarked on the different forms of intra-cranial hæmorrhage he had observed, and presented a number of specimens in illustration. There exists no well-defined descriptions of the various forms of hæmorrhage with reference to their etiology, and no classification that could be of any service in medico-legal examinations. He suggested the classifications and observations presented below as particularly adaptable for the latter purpose. These records may also be of use to the surgeon who wishes to trephine. The observations were sufficiently numerous to warrant conclusions of importance. Dr. Formad met his cases on the autopsy table only, and hence is unable to offer clinical details. In some cases the history was far from being reliable, and in a few the history was left to conjecture from the surroundings, the circumstances of the case, and the appearance and general lesions of the body. He wished to credit his colleague in coroner's work, Dr. R. R. Stewart, for assistance in these observations, and also his assistants, Drs. A. J. Plumer and George H. Chambers. Dr. Formad's cases of intra-cranial hæmorrhage embrace the results of the various kinds of head injuries (traumatic) and cerebral apoplexies (idiopathic hæmorrhages) as well.

By the term "cerebral apoplexy," he meant exclusively hæmorrhage in the brain, and did not refer to "congestive," "serous," "embolic," or "nervous" apoplexies and other affections which tyrannic nomenclature has thrown together under the name "apoplexy." Idiopathic cerebral apoplexy should also be strictly separated from traumatic cerebral hæmorrhage; this is *not* done by some writers. The latter can be sub-divided into very well-defined sub-varieties of hæmorrhages, each etiologically, as will be shown below. These observations will clearly show the necessity and usefulness of a classification such as suggested. The diagnosis during life as to whether a cerebral hæmorrhage is due to disease or to injury, or both combined; or as to whether a head injury preceded or followed an intra-cranial

hæmorrhage is often very difficult. He had seen errors made by foremost surgeons and physicians and in the best hospitals in this city. He had seen bad cases of apoplexy diagnosed as fracture and trephined, and he had seen some cases of fracture of the skull unrecognized and untouched—left to die in the medical wards.

Upon the *post mortem* table, however, there should be no difficulty in diagnosing such lesions in the present status of morbid anatomy as a distinct and well-defined science. After sufficient accurate observations have been made, and after seeing conditions repeat themselves, case after case alike, and having in the majority of instances cause and effect directly before the eyes, one should be enabled in disputed cases to make a *post mortem* diagnosis which leaves but little room for doubt.

Dr. Formad divided the cases of intra-cranial hæmorrhage observed by himself into the following eight different classes, the accounts being given here in abstracted form :

Class I. (12 cases), *Post Mortem Appearance*.—One or more small hæmorrhages in the fasciculi teres in fourth ventricle; also ecchymoses in the lining of the other ventricles; no massive hæmorrhage anywhere; cerebral substance as well as membranes intensely congested; cranium much congested; drops of blood oozing from the cut surface and from periosteum all over; marks of contusion in scalp with more or less ecchymoses noted in all cases.

Histories.—In two cases death was caused by electricity. Ten cases revealed histories of concussion of brain from injuries to the head, without fracture of the skull. Death was rapid or sudden from shock in all these cases. 6 were males and 6 females; the majority were young persons.

Class II. (33 cases), *Post Mortem Appearance*.—Massive hæmorrhage (blood clots) of various sizes found between pia and dura-mater; location in majority of cases about opposite to place of application of violence. In none of these cases was this meningeal blood clot located immediately beneath the point of application of violence. Ventricular ecchymoses found usually. Brainanæmic in the majority of cases whenever hæmorrhage was large. Scalp injury well marked in some, in others less so, while in a few cases it was hardly noticeable.

Histories.—Concussion from injuries to head without fracture in 21 cases; with fracture of skull in 2 cases. Death rapid (all within one hour) or sudden either from shock or

from compression of brain, the result of pressure from clot, or from both. 14 males; 9 females; ages varied.

Class III. (45 cases), *Post Mortem Appearance*.—Massive hæmorrhage (blood clot) usually quite large; located between dura-mater and inner surface of fractured skull and at the site of application of violence only. Brain anæmic.

Histories in all these cases revealed injuries to the skull from accidents, blows, or other violence resulting in fracture of skull. Death on the average ensued slowly from compression or anæmia of brain in the lapse of from several hours to several days (in a few cases from 5 to 8 days). 38 males and 7 females; majority young and middle-aged persons.

Class IV. (12 cases), *Post Mortem Appearance*.—Massive hæmorrhage, the same as in the preceding class, but occurring both at site of application of violence and also on some point on the opposite side of skull—the first a large clot between dura and pia mater, while the latter, usually a small one, in the arachnoid (between dura and pia mater). At the site of injury there was found a fracture of the skull in all these cases, so that they presented the combined features of Classes II. and III.

Histories.—These 12 cases showed injury to skull resulting in both fracture and concussion. Death was nearly instantaneous in all these cases. 9 were males and 3 were females; mostly young and middle aged persons.

Class V. (9 cases), *Post Mortem Appearance*.—Punctiform and multiple hæmorrhages into the tissue of the dura mater, which showed much thickening and adhesions to inner surface of skull from chronic hæmorrhagic pachymeningitis; great œdema of the pia-mater. Brain congested, but no blood clot in either ventricles or substance.

Histories in these cases revealed former attacks of sun-stroke or old injury of head. Death usually sudden and usually following a fall or severe intoxication and excitement. Ages between 20 and 50; all males.

Class VI. (34 cases), *Post Mortem Appearance*.—Massive hæmorrhage of various sizes into the brain substances proper and thence into one or both of the lateral ventricles. Hæmorrhagic softening of brain substance of corpora striata or their vicinity. No meningeal hæmorrhage in any of these cases, though in some instances blood was observed to have leaked out from the inner ventricle through the transverse fissure and the fourth ventricle, and some usually liquid (*post mortem*) blood would be seen on the surface of

brain, within the meshes of the pia-mater and archnoid. Brain substance in nearly all cases quite anæmic. Atheroma of cerebral vessels in all but three cases. Multiple small aneurisms of cerebral vessels noted in several cases. Chronic pachymeningitis in various degrees in all but five cases. In some cases there were scalp injuries from second falls—*i. e.*, falls that were the result of preceding cerebral hæmorrhage. Many of these cases had come under coroner's jurisdiction on account of suspicion of violence.

Histories, wherever attainable, revealed alcoholism, rheumatism, or syphilis. Middle or advanced age. 26 males, 8 females. Death in the majority of cases ensued slowly. These are true cases of idiopathic cerebral apoplexy.

Class VII. (6 cases), *Post Mortem Appearance*.—Massive hæmorrhage of various sizes below pia-mater, into brain substance, without breaking into lateral ventricles. In one case the blood clot involved the substance of the pons, and protruded into fourth ventricle; in 2 cases it occupied the substance of the right parietal lobe which was the seat of an abscess; in 3 cases the hæmorrhage was multiple, in small foci, with localized hæmorrhagic softening of periphery of brain substance in various places; in 3 cases there were atheromata, and in the other 3 fatty erosions of the cerebral vessels. Chronic pachymeningitis in all cases. Brain substance congested.

Histories were those of former head injuries, alcoholism, and probable syphilis. Death rapid following intoxication or exertions. Age advanced in all cases. 5 men, 1 woman. Foul play had been suspected in all these cases.

Class VIII. (2 cases), *Post Mortem Appearance*.—Massive meningeal hæmorrhage, below pia-mater, combined with hæmorrhage into ventricles; no visible hæmorrhage into brain substance. Atheroma, and multiple, small aneurisms of vessels of pia and of choroid plexus. Ecchymoses in scalp.

Histories of accidental falls. No previous symptoms of cerebral disease had been noted. Intemperate habits, injury of head, leading to rupture of the diseased vessels, evidently had preceded the cerebral hæmorrhage. The persons were at work (washing) at the time, when, nearly simultaneous with the concussion from the fall, death ensued. Both were women. Ages 57 and 63 years.

Remarks and Comments.—A number of cases of intra-cranial hæmorrhage observed, Dr. Formad had excluded from the series. Several cases of compound comminuted fracture,

in which the skull, membranes, and brain were partly pulped into a mass, and hence the hæmorrhage not being satisfactorily made out, were also excluded. He also excluded chronic cases of cerebral hæmorrhage, and those resulting in abscesses or in a fatal lepto-meningitis or cerebritis, after the patients had partly recovered from the immediate effects of the hæmorrhage. Nor did he incorporate another large class of intra-cranial hæmorrhage, viz: that of infantile meningeal hæmorrhage. Of these he had seen many in coroner's work. Meningeal hæmorrhage is common in infanticides and foeticides, and even in still-born children. He could not plausibly explain the frequency of meningeal hæmorrhage observed in the still-born, otherwise than by presuming that they were due to traumatic injuries from violence, or to compression of the cranium during protracted labor, or when forceps had been injudiciously applied. He did not meet with cerebral hæmorrhage in children other than meningeal.

Returning to his classification, Dr. Formad stated that the quantity of the hæmorrhage or the size of the clot in any case of intra-cranial hæmorrhage, appeared in all the cases he observed, to depend upon the duration or the time that elapsed from the moment of injury to death. In cases where death ensued rapidly or instantaneously from shock, as in many fatal cases of concussions, or even in fractures of skull followed by immediate death as from falls from a great height, the bulk of the ante-mortem hæmorrhage (the blood clot) was remarkably small, or clots were occasionally absent, and only a *post mortem* oozing of liquid blood could be observed. When death is protracted for several hours, then the blood-clot was unusually large, weighing up to six or eight ounces, and caused death by compression of brain. In some cases of fracture of skull the hæmorrhage is probably delayed for several hours, or ensues but very gradually. Some patients are said to have walked around for many hours after the injury, and subsequently when the blood oozed out in sufficient quantity to compress the brain, they fell, became unconscious and died in coma. In one case of this nature he had found a meningeal clot weighing eight ounces.

Dr. F. observed that in the cases in which the intra-cranial hæmorrhage was voluminous and death instantaneous, there was very little scalp ecchymosis; whereas scalp hæmorrhage was more pronounced if the intra-cranial hæmorrhage was small and death delayed.

Dr. F. noticed that in no case where there was internal cerebral hæmorrhage, was there any meningeal hæmorrhage when cerebral vessels were normal; and in no case of traumatic meningeal hæmorrhage did he see any co-incident ventricular hæmorrhage (except small ecchymoses) unless there existed some old lesion of the vessels or substance of brain. It appears, however, that blood from the lateral ventricles may leak through the foramen of Munro into the third ventricle and thence, by the aqueduct of Sylvius, find its way into the fourth ventricle; but Dr. Formad did not see in any one of the cases that he observed that a primary hæmorrhage into the fourth ventricle ever extended to the lateral ventricle, probably on account of its rapidly fatal character. A hæmorrhage on the outside of an uninjured pia-mater cannot reach the interior of the brain or the lateral ventricles.

The source of the hæmorrhage is often very difficult to determine. In fracture of the skull, the hæmorrhage is often diploic; in concussion of the brain, the hæmorrhage has for its source the vessels of the pia-mater; in diseased conditions of the brain, or in atheroma of vessels, the small feeding branches of the middle cerebral and of the basilar artery bleed most frequently, and the blood breaking into lateral ventricles forms clots in either one or both of the ventricles.

The view expressed by Dr. S. A. Lidell in his large *Treatise on Apoplexy* (New York, 1873, p. 113), that "meningeal hæmorrhage not unfrequently occurs spontaneously, as well as in consequence of the operation of violent causes;" and that (page 120) "meningeal hæmorrhage of spontaneous origin is not a rare affection" is unquestionably erroneous. Yet such "views" are quoted by book-writers on forensic medicine, and presented to juries in murder trials, *as fact*.

- Ignorant or ill-informed *post mortem* examiners can set murderers free, or, on the other hand, can create unnecessary court trials.

The conclusions arrived at by Dr. Formad are :

1. Hæmorrhage exclusively above the pia-mater and above the dura-mater, i. e., on the outside of the brain, is always due to *traumatism* or to *sunstroke*, provided a cerebral source for hæmorrhage is excluded and the cerebral vessels and membranes were not diseased.

2. Hæmorrhage in the floor of fourth ventricle is always traumatic, provided there are no blood clots in the lateral ventricles or any part of the cerebral substance.

3. Hæmorrhage exclusively below the pia-mater, or in any part of the brain substance or in the ventricles, (except the fourth) is always idiopathic, i. e., is due to disease.

4. There must be a diseased condition of the cerebral vessels or substance in order to ascribe a hæmorrhage to a disease. There must be a traumatism (fall or violence) in order to account for hæmorrhage in a normal brain.

5. The blood clot in concussion of the brain is not found at the point of application of violence, but always somewhere about the opposite side of the brain, and always within the arachnoid, i. e., between pia mater and dura-mater.

6. The blood clot in fractures of the skull is always found at the point of application of violence immediately below and always between the dura-mater and the fractured part of the skull itself.

7. A blood clot formed within the cranial vault is more favorable to the patient if due to the fractured skull than if due to a mere concussion.

8. Only clotted blood and infiltration of blood corpuscles into tissues indicate an ante-mortem hæmorrhage; liquid blood is due to post-mortem oozing, and only stains, but does not infiltrate tissues.

9. Severe bruises and cuts of the scalp may be seen in cases of idiopathic apoplexy where a sudden cerebral hæmorrhage causes a person to fall.

10. In some cases it is impossible to decide by medical examination alone as to whether a head injury and the resulting hæmorrhage is due to a fall or to violence.

11. External marks of violence may be invisible to the unaided eye in some cases of injury of the head or other parts, but are easily detected and distinguished from post-mortem spots by the microscope.

12. The bulk of an intra-cranial hæmorrhage stands, usually, in inverse proportion to that of the lateral scalp hæmorrhage.

Cortical Hæmorrhage with Contraction and Movements of Muscles.

Dr. T. D. Dunn presented an unusual case of cortical hæmorrhage with rhythmical contractions of the left side of the body. A widow, age 73 years, came under his care June 23d, 1885, with the symptoms of congestive apoplexy. In a few days she recovered sufficiently to be able to leave her room. With the exception of some mental impairment for several months before the attack her health had been

good. July 2d there was a second attack during the night, and when Dr. D. saw her there were regularly recurring movements of the left side of the body. Sensation and consciousness were not affected. The right side of the body could be moved at will, but articulation was impossible. The contents of bowels and bladder were discharged involuntarily. The movements continued during sleep. The movements gradually diminished, being lost in the leg on the fourth day and in the arm on the fifth. She died six days after the attack. At the autopsy a clot as large as a hen's egg was found situated on the right side of the brain very superficially extending from the ascending parietal convolution to the occipito-parietal fissure, and from the convolution of the longitudinal fissure to the temporo-sphenoidal lobe. The convolutions pressed upon and partially destroyed were the ascending parietal, the convolution of the longitudinal fissure, the supra-marginal, and the angular gyri.

Analyses, Selections, etc.

Case of Hydrophobia—Fatal—Post-Mortem.

Dr. P. H. Kretzschmar, of Brooklyn, N. Y., reports an interesting case in *New Yorker Medizinische Presse*, May, 1886. J. H., age 47; a Swiss by birth, in good health, showing no hereditary taint, was bitten, on March 6th, 1886, by a dog in the right hand, tearing the flesh between the index-finger and thumb.

He went at once to Dr. E. F. Hartung, who cauterized the wound with nitrate of silver, and sewed up the lacerated part. On the 10th the sutures were removed, and on the 16th of the same month he was dismissed as cured. The dog was at once shot; hence nothing could be told about his condition. He did not think of hydrophobia till during the early part of May. While in a heated discussion with a friend, a large dog, belonging to the latter, sprang at his throat, but was knocked off without touching him with his mouth, yet this circumstance depressed him for some time afterwards.

On May 11th, he complained of feeling badly, and did not sleep well that night. The next morning, before going to

work, he took a Seidlitz powder, which he swallowed with some difficulty. He was soon afterwards attacked by convulsions, and found greater difficulty in drinking and breathing.

Dr. Hartung was called in, and prescribed for the "asthmatic" attack, iodide of potash 5ss. every half-hour. At 10 P. M., Dr. Kretzschmar saw the case for the first time in consultation. As he entered the room the patient was taken with a violent convulsion, lasting for a short time only, but others came on at the least disturbance. A physical examination showed nothing. Pulse, 84; respiration, 28 to 30. The wound, which before had been smooth and white, was now a little raised, of a blue tinge surrounded by a red zone. *Treatment*:

R_y. Morphia^æ. sulph.....gr. $\frac{1}{8}$.
Tinct. hyoscyami.....m xii.

M. S.—Repeat every hour.

This produced no visible effect on him. On May 12th, about 7 A. M., the patient expressed, for the first time, his fear of death from hydrophobia. Convulsions very frequent, and morphia^æ sulphatis, $\frac{3}{8}$ grain, was given him every hour. On a close examination of the mouth and throat no hydrophobic vesicles (morechetti) could be found. Tongue red and dry; skin perfectly normal; pulse, 84; respiration, 28 to 30, at 11 A. M.; no loss of consciousness. During the following twenty-four hours he drank 3iij of brandy and some bouillon, but he would eat nothing solid. At 3 P. M., the patient was somewhat better. The convulsions came on about every ten minutes instead one every two or three minutes; consequently the dose of morphine was reduced to $\frac{1}{8}$ grain. At 11 P. M., his condition was much worse; pulse, 140, small and weak; he expectorates a great deal of tough mucus slightly colored with blood. Articulation became quite indistinct, but his mind was clear to the last. Almost continuous convulsions occurred up to about fifteen minutes before his death, when he became perfectly at ease. He died May 14th, at 7 A. M., just forty-eight hours after the first symptoms developed, and sixty-nine days after being bitten.

The *post-mortem* was made by Dr. E. C. Spitzka, on May 15th. Present were Drs. W. H. and P. H. Kretzschmar, E. F. Hartung, J. Van Cott, R. Molenhaur, N. Bull, and F. A. McGuire. The body was well developed. Decided rigor-mortis of the lower extremities. The entire brain and spinal cord were removed carefully together. The dura mater

showed the usual injection of the blood vessels, also very prominent pink spots; it was quite adherent to the leptomeningea; the larger blood vessels were empty and very thin walled. [Liquor cerebro-spinalis normal, both in quantity and quality. The pia mater was very easy to separate from the underlying surface. The brain substance of usual consistence, and all parts normal and regular—as a whole, somewhat anæmic. The striæ medullares were atypic, in so far that on the left side there was only one transverse medullary stria, and on the right none. The posterior and lateral columns of the spinal cord were decidedly gray. A small surface on both sides of the tract of Gull, and that part of the tract of Burdach which is in immediate contact with the pia, were white. The microscopic examination had not, up to this writing, been made.

Therapeutics of Typhoid Fever.

During the session of the Association of American Physicians, in Washington, D. C., June 17th, Dr. F. Peyre Porcher, of Charleston, S. C., read a paper on this subject—chiefly dwelling on his own experience. It is a mistake to trust simply to statistics of death-rate following any prescribed course of treatment—especially hospital statistics, as patients are apt to come in at an advanced stage. The surrounding circumstances of each patient must be considered. He had lost but three cases—a fraction over 9 per cent. All fevers are ushered in by costiveness, and generally there is some mental anxiety in the patient, which, in nervous cases, may cause diarrhœa—sufficient generally to cause dryness in the mouth. That anxiety produces such dryness is a known fact, and is made use of in India to detect a thief. He is made to chew dry rice and spit it out; if guilty, the rice he has chewed is dry. A mild laxative, preferably mercurial, at the commencement of the attack is generally useful. Stimulants are good to overcome exhaustion. Internal and external antipyretics are important, since high temperature is an element of great danger. He applies ice-cold water to the head by means of a soft towel, soaked in the water, and frequently changes it. By another towel the ice-cold water is sprinkled on the arms; sometimes he immerses the hands and arms. This should be continued from fifteen to thirty minutes at a time, until the surface is cool. This method is more easily used than the wet pack or cold bath. It not only reduces temperature in continued fevers, but he has seen it, in malarial fever, bring down the tem-

perature of 107° or 108° . Sponging the lower extremities with alcohol and water is sometimes very soothing. He uses as a febrifuge a mixture of sweet spirits of nitre, aconite, spirits of Mindererus, and acetate of potash. In cases complicated with malaria, he resorts to quinine and arsenic, but *not* large, frequent doses of quinine. The alkaline treatment is indicated in the early stage, and acids are valuable later on. Sordes on the tongue and delirium call for stimulation. In delirium, cantharides to the back of the neck are useful. For tympanites, turpentine, externally and internally, is the best remedy—acting as a general and special styptic. Rubbed up with mucilage, and given with carbonate and muriate of ammonium, it is invaluable in the broncho-pneumonia, which may occur in typhoid fever. In this condition he uses with great advantage cotton-batting, with oiled silk to cover the chest. When albuminuria occurs, he administers quinine and tannin, two grains each, three times a day; for nausea, small doses of ipecac. Carbolic acid and tincture of iron reduce the temperature, but they do not cut short the disease.

Dr. James Tyson, of Philadelphia, had found that where it was necessary to keep up a continued antipyretic effect by the use of cold water externally, he applied towels dipped in ice-water and wrapped about the trunk of the patient. Antipyrin causes chilliness and chattering, which have a bad moral effect, and small doses soon lose their effect. He had employed small doses of thallin in four-grain doses with the effect of reducing the temperature 2.5° in half an hour; but with the same objectionable chilliness and chattering following. The same medicine had been repeated in half the dose with the same good result and without the unpleasant effects, but its influence was very transient. He considered antipyrin and thallin invaluable for the reduction of temperature, except where a continued antipyretic influence is required, and then he prefers the external use of cold water.

Dr. J. T. Whittaker, of Cincinnati, considered elevation of temperature nature's remedy to get rid of the cause of the disease. It is now pretty clearly demonstrated that the disease is caused by bacillus. We must attribute changes that occur in the disease to the cause, and not to the heat of the body.

Dr. F. T. Miles, of Baltimore, said that in some cases the disease runs its course with a normal, or even subnormal, temperature.

Dr. E. Darwin Hudson, of New York, believed the best

method of treatment is, in many respects, a negative one; the poor are more likely to get well than the rich. The treatment he endorsed consisted in sponging the body every two hours with water whenever the temperature rose to 102°F. He keeps the patient with a rubber cloth under him and a wet sheet above him. He employs an exclusively milk diet, which is of wonderful value, and continues it on into convalescence.

Dr. S. C. Chew, of Baltimore, could hardly consider the treatment just described as negative, since, although Dr. Hudson did not employ ice-water, the temperature of the water was still lower than that of the body. Antipyretic treatment is extremely important, even though the bacillus theory be admitted. He considered quinine, given hypodermically, almost a specific antipyretic, having far more influence administered that way than by the mouth. He uses quinine hydrobromate so prepared that twenty minims represent four grains.

Dr. Frederick P. Henry, of Philadelphia, having read reports of very favorable results from the use of Labbaraque's solution, had tried it in twenty-six cases, and lost four. He had also more relapses than is usually observed. Referring to quinine hypodermically as an antipyretic, he readily understood that its effect might be increased by that method of employment. Bichloride of mercury, in certain syphilitic skin diseases, is greatly intensified by being administered hypodermically.

Dr. W. H. Draper, of New York, believes that where there is continued hyperpyrexia, the cases generally prove fatal in spite of antipyretics. Their value is that they contribute to the comfort of the patient; they do not materially lessen the death rate.

Dr. William Pepper, of Philadelphia, quite agreed that in this disease hospital statistics are worthless. He did not consider a death rate of from ten to fifteen per cent. much below what it would be if no special treatment was instituted, and therefore thought that arguments based on methods of treatment showing such a result, fallacious. It is a mistake to consider temperature as of great importance in the treatment of typhoid fever. He insisted upon the value of absolute rest and rigid diet. Abstraction of heat is important. Some remedy should be addressed to the intestinal canal. His preference was for the salts of silver. Where cases come under care early, a mortality greater than six per cent. is not a satisfactory result in private practice.

Dr. Porcher agreed with Dr. Tyson in his method on theoretical grounds, but practically it is very difficult to carry it out. In order to wrap wet towels around a patient, he has to be moved. In typhoid fever, the patient is generally in a very weak condition. Then there is the difficulty of keeping the bedclothes, etc., dry. All these objections were met in his method, and the results were as satisfactory. He was surprised no one had spoken of the value of the fever mixture he had mentioned. Some had spoken of the disease running its course without fever. This must be considered as one of the rarest occurrences.

Book Notices.

Field and Limitation of the Operative Surgery of the Human Brain. By JOHN B. ROBERTS, A. M., M. D., Professor of Anatomy and Surgery in Philadelphia Polyclinic, etc. Philadelphia: P. Blakiston, Son & Co. 1885. Cloth. 8vo. Pp. 80. Price, \$1.25. (For sale by West, Johnston & Co., Richmond).

This is practically a reprint of the paper which Dr. Roberts read before the American Surgical Association in 1885, and of which we gave a somewhat lengthy synopsis in our May number, 1885, reporting the proceedings of that Association. This paper will always remain classical with advocates of trephining the skull for many troubles besides depressed fracture of the cranium. We wish the entire discussion which occurred on the subject on the occasion referred to had been incorporated as a part of the book. This would have made the present publication an essential one to every practitioner who proposes to do brain surgery, for then the views of others could have been learned at the same reading. But, as the book stands, it is worth fully its price, because of the carefully compiled and useful tables on pages 53-58, giving (1) Indications in traumatic cases; (2) Contra-indications; (3) Points for opening the cranium when operations are indicated; (4) The more uncertain localizations.

Local Anæsthesia in General Medicine and Surgery. By J. LEONARD CORNING, M. D., Physician to New York Neurological Infirmary, etc. New York: D. Appleton & Co. 1886. Cloth. 8vo. Pp. 103. (For sale by West, Johnston & Co., Richmond).

This remarkably successful investigator of oft' trodden fields of medical science seems to have the nack of finding

the very treasures others have searched for and missed. The book reads as an entertaining record or history of general anæsthetics; but its chief purpose and merit consist in announcing his great discovery which has given this young practitioner a world-wide fame. He styles his method "Local Anæsthetization by Incarceration of the Anæsthetic in the Field of Operation." Briefly stated, his method is about as follows: (1) Map out the superficial veins; (2) Apply Esmarch's or other bandage from the most distal extremity to a distance of some six or eight inches beyond the field for operation; (3) But just before reaching the point for operation, make hypodermic injections of weak solutions of cocaine; then, if desired, the bandage may be continued a short short distance beyond the upper margin of anæsthetic zone. Be careful *not* to bandage over the point of injection; (4) Apply tourniquet just beyond upper margin of Esmarch's bandage; (5) First, inject superficially as rapidly as possible; and after superficial anæsthesia begins, then make deep injections of the cocaine; (6) The greater the extent of the operation, the weaker should be the solution—not over one or two per cent. The tourniquet holds the solution in contact with the nerve filaments. But our want of space forbids a fuller description. The discovery is a grand one, and one which every practitioner may adopt. But to secure the proper results, the book should be in the hands of every doctor. The book is handsomely gotten up.

Fractures and Dislocations. By T. PICKERING PICK, F. R. C. S., Surgeon to and Lecturer on Surgery at St. George Hospital; Member of the Court of Examiners, Royal College of Surgeons of England. Lea Brothers & Co. 1886. (From Publishers).

This book comes as one of a series of "*Clinical Manuals for Practitioners and Students of Medicine*," and as such very well fills its place; though, apart from the desire that there be a complete series, we fail to see the necessity for the work. No new methods of diagnosis or treatment are advocated as regards either fractures or dislocations; yet it is fairly up with the times, and would suit well as a companion on a hurried trip in the country when one expected to face fracture of femoral neck or complicated luxation without having had time to rub up on the subject, being unwilling to take a work on general surgery for obvious reasons. The author draws his information largely from English and Continental writers, and frequently refers to American surgeons in complimentary terms, and shows himself to be a thorough

student, entirely familiar with those branches of surgical science which he has discussed in the neat little volume before us. N.

Parke, Davis & Co.'s Compilation on Erythroxyton Coca.

This is an octavo, finely published pamphlet of over 100 pages, on "Coca Erythroxyton and its Derivatives," giving articles as they have appeared in the medical press on this remarkable drug and its preparations, including their history, botany, chemistry, physiological action, therapeutical applications and medicinal preparations, etc. The great interest this firm has shown in doing all in their power that helps the doctor to test the value of new drugs, etc., places the profession under lasting obligations to Messrs. Parke, Davis & Co. Their drugs are manufactured after the most approved methods, and their products may always be relied on for absolute purity. Dr. Squibb even does not put upon the market more reliable chemicals and pharmaceutical preparations.

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

Report of Proceedings of Illinois State Board of Health, April 14-15, 1886. Pp. 10. DR. JOHN H. RAUCH, Secretary, Chicago.

Circumscribed Peritoneal Dropsy. Simulating Ovarian Dropsy. DR. H. P. C. WILSON, Baltimore. 12mo. Pp. 10. (From *Md. Med. Jour.*, March 2, 1886.)

Natural Hygiene of Child-Bearing Life. DR. S. C. BUSEY, Washington, D. C. 8vo Pp. 14.

Cholera in Palermo, Italy, 1885. DR. PHILLIP CARROLL, U. S. Consul at Palermo. (An excellent statistical and diagrammatic paper in U. S. Consular Reports, No. 61—Feb., 1886. By Department of State.)

Fracture of the Coracoid Process. DR. J. WELLINGTON BYERS, Charlotte, N. C. 8vo. Pp. 10.

Surgical Treatment of Cysts of the Pancreas. DR. N. SENN, Milwaukee, Wis. 12mo. Pp. 58. (From *Jour. Amer. Med. Ass'n*, Sept. 26 and Oct. 3, 1885.)

Foreign Bodies Left in Abdomen After Laparotomy. DR. H. P. C. WILSON. 8vo. Pp. 15. (From *Gynæc. Trans.*, 1884).

Cholera Infantum. DR. WM. PERRY WATSON, Jersey City, N. J. 8vo. Pp. 21. (From *Arch. Pediat.*, Aug., 1885.)

VIRGINIA MEDICAL MONTHLY,

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RICHMOND, V.A.

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LONDON B. EDWARDS, M. D.....EDITOR AND PROPRIETOR.

Original Contributions solicited from all sections; but the Editor does not hold himself responsible for the views of authors.

Articles contributed to the pages of this Journal must not be duplicated in other journals by the author without proper credit being given to the Virginia Medical Monthly.

Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

State-Bordêr Practitioners and Boards of Examiners.

Now that State Boards of Examiners, as licensing boards, are becoming so general throughout the United States, an annoyance arises in the case of those physicians who reside along the boundary lines of the States, which must be sought to be overcome. We take, for illustration, the border line between Virginia and North Carolina. Each of these States requires the party who proposes to enter practice within its limits to pass examination before the respective State Board of Medical Examiners. Their standards are properly high, and about equal in grade. But a country physician's regular range of practice almost invariably extends eight or ten miles around his home as a centre. Hence, under the existing laws of the two States named, the practitioner who resides within this distance of his State lines must necessarily have certificates from each of the two State Boards of Examiners, or else he is liable to the penalties of the law.

What we propose is that there should be a conference between representatives of State Boards of adjoining States having anything like similar laws on the subject, and agree upon some recommendation to their respective Legislatures for a change of statute which will permit the practitioners within ten or twelve miles of the boundary line of another State who have certificates of the Board of Examiners of the State of which he is resident to practice within a like distance in the adjoining State *without* the requirement of

having to stand an examination before the Board of that State. In other words, within certain limitations, let the certificate of one State Board of Examiners serve as a sufficient evidence of qualifications to practice in an adjoining State.

We do not propose to argue the question at this time, for it is self-evident that the laws as they now stand do not accomplish what they sought to do. It was not the intention of either State to rob the citizen of the skill of the physician, but simply to satisfy the citizen that the licensed physician is a *qualified practitioner*. We are willing to trust this matter to the decision of the very excellent Examiners who compose the North Carolina and Virginia Boards; and we presume that equal care, as a rule, is exercised in the selection of Examiners for other States, since the laws have been mostly so framed as not to admit of the stain of "politics" in selecting them. We throw out the suggestion, and await the opinions of others.

St. Luke's Training School for Nurses.

There is perhaps no professional subject in which more interest is being centered at the present time than in the proper training of nurses for private practice and hospital service. We have alluded to the fact that our Southern people seemed slow to appreciate the vast difference between the Sally Gamps, upon whom we have had to depend, and one trained to be, in the fullest sense of the words, a comfort and helper to physician and patient.

In our columns we have also alluded with regret to the fact that there were so few centres in the South where a nurse could be trained. As far as we are informed, we can boast of but two training schools—one in Charleston, S. C., and the other in New Orleans. We are glad to know that the managers of St. Luke's Hospital, of this city, are alive to this great necessity, and propose, in the coming Fall, to open a training school in connection with their institution, and the course of instruction, as noticed below, promises to make the training complete in every respect. It will include the dressing of blisters, burns, sores, and wounds; the application of fomentations, poultices, cups, and leeches; the administration of enemata; the use of the catheter, electricity, massage, and bandages; the management of appliances for gynecological and surgical dressings; the care of helpless patients; making beds, moving, changing, giving baths; preventing and dressing bed-sores, and changing position. Special instruction will be given in hygiene, and all

that pertains to it—such as ventilation, disinfection, etc. Instruction will be given in recording clinical facts in regard to the temperature, respiration, circulation, alimentation, sleep, etc. Students will be taught to note changes in the normal as well as the abnormal discharges; and instructed in cooking, and as to the usual doses of common drugs, their effects and antidotes. An insight into the principles of anatomy, physiology, symptomatology, hygiene and therapeutics will be given by lectures, demonstrations, and recitations.

In every community in the South there are women of refinement and culture who should find in nursing a sphere of usefulness alike remunerative, honored, and pleasant; and they should patronize an institution which desires to lend them a helping hand.

Inhumanity versus So-Called Cruelty.

So far as possible, we are disposed to live peaceably with all men. But we are sometimes so impressed with the truth of the current saying that "fools are not all dead yet," that we cannot help giving expression to it. Especially do we feel the necessity for such an expression now, when we are informed that the "Society for the Prevention of Cruelty to Animals" has caused the arrest of, and is prosecuting in court, Dr. B. A. Watson, of Jersey City, N. J., because, in order that he might study the effects of certain injuries to the spinal cord, from a height of some twenty-five feet, he has let some dogs fall upon a wooden floor, striking at a pre-arranged spot, and so producing a pre-determined lesion. The occasion for this special line of investigation on the part of Dr. Watson is of frequent occurrence; and as a profession we would all have looked forward to the proposed results with interest, and possibly—even probably—benefit, which benefit we were to convey to patients. Railroad accidents, jumps from the windows of burning houses, and the like, are daily occurring, leaving a class of injuries to the spinal cord the exact nature of which are not perceptible in the beginning, but the effects of which become plainly evident in a short while. It was to study, by vivisection and autopsies, the anatomical changes which arise in the progress of such cases that the distinguished surgeon and Christian gentleman undertook these investigations. The purpose was to transfer the information he might so obtain over to the benefit of his fellow-man. What a set of fools a society of men must be in this enlightened day to attempt to oppose progress in scientific investigation intended to benefit *humanity*

at so slight a cost as the suffering for a time of a few *dogs*! The case in court should be recorded, *Dogs versus Humanity*—*nolle prosequi* entered, or dismissed, with costs against plaintiff. We trust there is enough common sense education among the people of New Jersey who may have to compose the jury in the case, to recognize, on mention, the necessity of experiment and observation on animals in order to arrive at profitable truth for the human race, and then there will be no necessity to rehash all the arguments in favor of vivisection, etc. We understand that Mr. Burgh will push this case to the extent of some \$20,000 or \$30,000 as a test case in court. He reminds us of the fellow who, having visited a court as a looker-on in a given case, saw the court decree a large amount to the plaintiff. The fellow went out, hatched up an unwarrantable law suit for damages against a neighbor, came into court, through his counsel, with the statement that he did not know whether "he had a case or not, but he would *just try it for awhile to see how the thing goes*" That fellow was a fool. What is to be said of Mr. Burgh and his allies in the case under consideration we leave to our readers to determine. It is *inhuman* so to attack Dr. Watson, who seeks to benefit his race. Rally to the rescue.

Engraving and Biographical Sketch of Edward Warren Bey., M. D., etc.

We are sure our readers, who are aware of the fact that this journal, from time to time, publishes engravings and biographical sketches of men eminent in the profession, will be pleased to learn that we have just completed arrangements to publish, in an early issue, a sketch and an accepted engraving of this distinguished son of North Carolina, whose fame fills at least three continents. His life has been eventful, and his achievements in medicine and surgery have made him renowned.

A Doctor's Experience in Three Continents,

By Dr. Edward Warren Bey., is about the most readable book of its class that we have ever read. Not one of the clippings from the press notices, copied in the inset-advertisement of the book, after reading matter in this issue of the *Medical Monthly*, exaggerates the interest and instruction which the professional derives. A high commendation was that which one of our eminent physicians told us:—"I frequently catch myself taking up the book to re-read what I read before." Read the advertisement.

Medical Graduates University of Virginia, June 28, 1886.

Drs. Robert L. Boccock, Keswick, Va.; B. W. Brown, Amherst C. H., Va.; Julian Cabell, Richmond, Va.; John Dunn, Petersburg; J. B. Earle, Gowensville, S. C.; T. J. Hoskin, Durant's Neck, N. C.; B. B. James, Axton, Va.; F. G. Jiggett, Madison Station, Miss.; H. E. Jones, Nebraska, Va.; W. J. Keller, Myrtle, Ala.; W. E. McGuire, Berryville, Va.; J. D. McKim, New York; C. C. Page, University of Virginia; S. P. Preston, Lynchburg; C. W. Rogers, High Town, Va.; Kirkland Ruffin, Old Church, Va.; W. M. Steward, Hopeville, Va.

To Messrs. Reed & Carnrick

Our thanks are hereby returned for a box of samples of their "Liquid Peptonoids with Coca," and of "Carnrick's Soluble Food." These preparations are admirably adapted to the dyspeptic, to convalescents, etc., whose powers of digestion are weak. We do our readers a service in calling their special attention to their advertisement in this issue of the *Medical Monthly*.

Summer in the Mountains.

Many a weary, broken-down doctor, lawyer, banker, mechanic, etc., needs a summer vacation in the mountains, where he can "rough it" for a season. To any such we can suggest such a place as the home of Dr. G. M. Nickell, of Millboro Depot, Bath Co., Va. We have "summered" there, and know that a more pleasant, retired and health-invigorating place cannot be found, especially adapted to invalids and children. It is surrounded by mountains of high and low degree, is in the centre of the Mineral Springs district of Virginia, and immediately on the line of the Chesapeake and Ohio R. R. Trout and bass fishing, deer, pheasant and partridge shooting in season, etc.

Healing Springs, Va., Property For Sale.

We wish by this heading to call the special attention of the few monied men in our profession to this rare opportunity to make a profitable investment. The peculiar natural advantages of these Springs as a health resort, etc., are so great that whoever takes active interest in developing their benefits will amass a fortune in a short while. Note the advertisement.

Florida House and Lot for Sale is one of the advertisements to which we would call special attention.

*Obituary Record.***Dr. Richard H. Cox**

died of paralysis, June 20th, 1886, at his home in West Point, Va. He was ill only two or three days. His sudden death will be sad intelligence to his large circle of friends, especially in Virginia. He was born in Essex county, Va., November 24th, 1824. He graduated from the Medical College of Virginia in 1843. He practised in King William county, Va., until about six years ago, when he moved to West Point. His practice was one of the most influential county practices we have ever known. He was a man of great ability, made strikingly useful to the communities in which he lived by his great generosity. During the war he was surgeon in the Confederate army. He was time and again elected Professor in various institutions, but declined all such honors. His loss to the Medical Society of Virginia will be felt severely. While in the Legislature of Virginia, he was ever alive to the interests of his profession.

Dr. Archibald Magill Fauntleroy

died suddenly at his home in Staunton, Va., June 19th, 1886. He was born in Warrenton, Va., July 8th, 1837. He was buried in Winchester, Va. His academic education was received at the Virginia Military Institute. He graduated in medicine from the University of Pennsylvania in 1860. In June of that year he entered the United States army as assistant surgeon, but resigned when the Confederate army was being organized, which service he entered as surgeon, and served on the staff of Gen. Joseph E. Johnston. Later, he was Medical Director of the Department of North Carolina, and afterward he was appointed in charge of the hospital at Staunton, Va., where he remained until the surrender. He remained in practice in Staunton till his death. In 1871 he was appointed a member of the Virginia State Board of Health. During the same year he was elected President of the Medical Society of Virginia. In 1872 he was elected as Honorary Fellow of that organization, in which he always took an active interest. For a number of years he was physician to the Virginia Institution for the Deaf, Dumb, and Blind. About four years ago he was elected physician in charge of the Western (Va.) Lunatic Asylum, in which capacity he served until a few months ago. Indeed, he was inseparably connected with the medical history of Northwestern Virginia, especially from about 1864 until his death. His contributions to medical literature have been many.

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RICHMOND, AUGUST, 1886.

Original Communications.

ART. I.—**Therapeutics of Cocaine, with Some Personal Experimental Observations.*** By M. D. HOGE, JR., M. D., Richmond, Virginia.

I propose in this paper to confine myself strictly to the subject assigned me, leaving aside the history and botany of the coca plant and its alkaloids, which has, in this country, made the name of Koller as renowned in local, as those of Wells and Long in general anæsthesia.

Cocaine, the most important alkaloid of the erythroxyton coca, has been given (first) by mouth, (second) locally, and (third) hypodermically.

In small doses, it acts as a cerebral sedative; in large doses as a cerebral stimulant. It paralyzes the posterior columns of the spinal cord, dilates the pupil, diminishes the secretion of urea, produces dizziness, ringing in the ears, flushed face, slight tremor in executing various movements, and often gives the body a pendulum motion. At first it increases, then impedes, and lastly stops respiration; it diminishes

*Read before Richmond Medical and Surgical Society July 13th, 1886, the Proceedings of which are published in this issue.

both the frequency and force of the heart's contractions; further, complete paralysis of sensibility, tetanic spasms, and death. It seems to act in a manner reverse to that of curare—one paralyzing the sensory, the other the motor nerves.

By Mouth.—I have seen it administered internally, with a most happy effect, in a violent case of *sea-sickness*, after the usual remedies had failed. In *morning sickness of pregnancy* it has been given with varying success—in some cases a decided amelioration, in others no sensible diminution. As an *antidote to an over-dose of opium*, cocaine has been given in very large doses; also in the opium habit one grain daily has been prescribed, with much benefit. The same applies to the *alcohol habit*. In *melancholia*, during the early part of the disease, it is said to have at once put a stop to it. As a *stimulant in weak organic heart troubles*, when the action is feeble and irregular, theory would point to a new field of operation. I would suggest the use of cocaine in the different forms of *cancer of the stomach, round ulcers*, and in *poisoning with substances* which corrode the lining membranes of the stomach and œsophagus—of course, only as a palliative measure.

In order to test the effects of cocaine given internally, Dr. Edward McCarthy, of this city, kindly placed himself at my disposal.

Before beginning the experiment the pulse was 68 and temperature $99\frac{1}{2}^{\circ}\text{F}$.

At 2:40 P. M., half a grain dissolved in two teaspoonfuls of water was taken by the mouth. It has a very bitter taste, similar to quinine but without the rough feeling.

At 2:45 P. M., a slight nervous feeling, with some little warmth in the stomach.

At 2:50, half a grain more was taken. Pulse, 64.

At 2:55, warmth in the stomach more marked.

At 3:00, another half grain was taken. Pulse, 64; temperature, 99. The tongue feels a little numb on the end; pupils slightly dilated; some warmth in the pharynx.

At 3:10, still another half grain was taken. Pulse, 60, and weaker; respiration, 24.

At 3:15, feels in very good spirits, and rested.

At 3:20, another half a grain was taken. Pulse, 56;

temperature, 99; respiration, 24. Warmth in the stomach decidedly more marked. Describes his feeling as "very good; similar to that after a big drink of whiskey." On walking about the room, feels light; face flushed. Up to now two-and-a-half grains in all have been taken.

At 3:25, after walking, the feeling of exhilaration passes off.

At 3:30, half grain more is taken. Pulse, 60. Describes his feeling as "glorious all over the body, with stimulating waves rushing through the limbs." Says he is intoxicated. A drowsy feeling five minutes before has given way to one of great energy. The flushed face and dilatation of the pupils come and go.

At 3:40, took still another half grain. Pulse, 64; temperature, $98\frac{3}{4}^{\circ}\text{F}$.

At 3:45, "Every breath feels stimulating."

At 3:50, another half grain is taken. Pulse, 65. The taste of the cocaine is not so bitter as at first. The mouth and tongue are very dry.

At 4:00, there is some slight tremor in all the fingers when outstretched. Pulse, 76; temperature, $98\frac{3}{4}^{\circ}$. No headache nor dizziness, but a continued happy exhilarated feeling; and as no grave symptoms were present, it was decided to give three grains more in one grain doses every fifteen minutes.

At 4:10, one grain in two teaspoonfuls of water was swallowed. Pulse, 76; temperature, 99° . All superfluous movements with the hands and legs, such as gesticulations and strides around the room, are very pleasant—in fact, irresistible. Has a constant desire to undertake vast feats of strength, and feels like harangueing.

At 4:15; pulse, 88. Tongue, anæmic and dry. The same delightful sensations have full sway; feels as if nothing he could see or hear would depress him.

At 4:20, one grain is taken. Pulse, 66; respiration, 28. Pleasant tremors shooting through the whole body.

At 4:25, with closed eyes, and toes together, the body has a pendulum-like motion laterally. A marked tremor of the outstretched fingers, and a disposition to sigh, and is unable to draw a deep breath.

At 4:35, the final dose is taken. Pulse, 88; temperature, 99. He is very talkative; the talk is not disconnected, but a repetition of the same idea over and over because words fail to express the delightful sensations.

At 5:20, the feeling of exhilaration fast wearing off; is sober, but feels foolish.

At 7:30, has had no hunger, although the last meal was at 8:30 A. M.—just eleven hours ago.

In all, seven grains in fourteen teaspoonfuls were taken in the course of about five hours.

The above teaches us, after two grains the first effects of the drug are felt; and after two-and-a-half, intoxication is produced, and finally additional doses maintain the exhilarated feeling.

Local Uses.—Cocaine has been used locally for almost every conceivable purpose—from plucking out gray hairs to the removal of corns. But its chief field of usefulness has been in *anæsthetizing the mucous membranes*.

Eye.—In the eye it has offered great relief in diseases of the cornea and conjunctiva—such as ulcers of the cornea and phlyctenæ, and in removal of pterygium. It has in a few cases been used in iritis. In cauterizing granular lids, the effect of the cautery (whether silver or galvanic) is not felt. And what is very important, no chemical combinations of any injurious character arise. What recommends the use of cocaine to the general practitioner is that he is enabled to remove foreign bodies without pain—a useful factor when treating children.

For the specialist, cocaine finds its greatest triumphs in the operation for cataract and iridectomy. It seems almost incredible that a patient with one eye can calmly look on and see every motion of the operator on the other.

I remember Becker, of Heidelberg, calling the attention of the class to the fact that there was almost always blepharospasmus after a somewhat prolonged use of cocaine in a tedious operation. This would seem to point to some action on the motor nerves, but that has been denied.

It has been found useful in dilating the lachrymal sac, and in operating for strabismus.

Cocaine, used continuously for twenty-four hours, has in some cases produced opacity of the cornea. Dr. Calhoun says when operating for cataract by extraction with the use of ether he had good results in 95.97 per cent. of his cases; and since the introduction and use of cocaine he has had bad results in about 50 per cent.

A two to four-per-cent. watery solution has found most favor among the oculists.

For earache, especially of neuralgic character, a warm four-per-cent. solution, in some cases, afforded almost immediate relief. In removing foreign bodies, growths, beads, insects, etc., or the introduction of the ear speculum in an inflamed condition of the meatus, it is a drug of great importance.

Nose.—The application of cocaine to the mucous membrane of the nose is very easy, and the action prompt, because the cavity is not large, and of such a shape that all parts are easily reached; and further, it does not interfere with any important function.

The most convenient way of reaching the interior of the nose is to take a small pledget of cotton and introduce it into the cavity by a slight twisting motion. In from five to fifteen minutes the operator may begin to straighten the septum, excise pieces of the turbinated bones and hypertrophied mucous membranes, or remove polypi. Now that cocaine has become so cheap I would suggest a small hand-spray as a useful mode of applying the solution thoroughly to the parts.

For "cold in the head," it has been used in a four-per-cent. solution, with benefit; also in cauterizing the Eustachian tube. In fact, it has been suggested by one author that an injection through the tube into the middle ear for earache of an inflammatory character might be used with great advantage.

Mouth.—In the mouth, abscesses of various causes and character have been painlessly opened. Slight operations about the tongue, and in the historical case of Gen. Grant, cancerous affections have been rendered more bearable.

I would suggest that the red, swollen, and painful gums of teething children be painted from time to time with a two to four-per-cent. solution.

Throat.—Cocaine has been most extensively tried in all throat affections, with and without reason. In the first place, for diagnostic purposes it is very useful, enabling one to use the rhinoscope and laryngoscope without irritation. In

painful deglutition from tuberculous and syphilitic ulcers it has often been used with most happy effect, and patients have been snatched from the jaws of a death of starvation by hunger. Sore throats have been alleviated, tonsils removed, polypi extirpated, and retro-pharyngeal abscesses opened and caustics applied without pain to the sufferer.

A remarkable case is reported by Dr. Howard A. Kelley. To use his own words: "R. P., age 19, has been suffering three days with a well-marked case of diphtheria. The cervical glands on both sides large, tonsils meet in the middle, uvula large and œdematous. These structures are covered with a thick, pultaceous mass of false membrane, so that the whole pharynx is hidden from view. I applied a four-per-cent. solution of hydrochlorate of cocaine three times at an interval of two minutes. Five minutes after the last application she drank a glass of milk without pain, and cleared her throat with great relief. She made a speedy recovery."

Rectum.—In the diseases of the rectum, cocaine has not proved as satisfactory as was at first anticipated. It has, however, been used with more or less benefit in hæmorrhoids when very painful, for dilatation of the sphincter, in operations for fissure, in removing polypoid growths and condylomata.

Penis.—The usual way of introducing cocaine into the urethra is on a wad of cotton fastened to a probe and dipped into a four-per-cent. solution. A more proper manner, especially when a long tract is to be anæsthetized, is to use a common male-syringe. Before injecting, grasp the penis firmly just behind the point at which the injection is desired to reach, and afterwards holding it in contact with the surface by pressure on the glans. Cocaine has been very successfully used in chordee in the manner just described; further, in strictures, either when gradual or brusque dilatation was desired, or even when urethrotomy is necessary. In cases not complicated with stricture, cocaine has acted promptly in relieving urethral spasms.

Bladder.—In chronic cystitis and in irritable bladder, one drachm of a four-per-cent. solution gave at once relief to the sufferer.

Gynæcology.—The gynæcologist having once put his hand to the speculum, looks back; in this most useful drug the whole of creation has been blessed. With success it has been used in vaginismus, and in operations for vesicovaginal fistulæ. Lacerated perineums have been sewed up, and later the sutures removed painlessly; also in removing urethral caruncles, and in cauterizing chancres and chancroids. Recently, in New York, a doctor was hastily summoned to attend a woman in labor. He found the os pretty well dilated; and after the bag of water broke, to use his own words, "A few drops of a watery solution of cocaine were smeared by the index finger around the labia and vagina; the uterine pains were not interfered with, the pains not so prolonged, nor was the last pain severe enough to make her cry. The case ended rapidly and very successfully to the mother and child." In still another case ten minims of a four-per-cent. solution were injected into the os, which dilated without the least pain; and in the second stage the walls of the vagina were painted with a four-per-cent. solution, and the child was born without the least trouble.

Skin.—In the form of oleate of cocaine various sorts of skin diseases have been treated, such as eczema, dermatitis, herpes rosacea, and urticaria. Before vaccinating it has been recommended to rub some of the oleate well into the skin. Oil of cloves may be used as a menstruum. For sore nipples it has given great relief.

Hypodermic Uses.—A certain amount of general anæsthesia can be produced by the hypodermic use of cocaine. This method has often been combined with the local application. As a rule, three to twenty drops of a four-per-cent. solution or one-fourth to three grains may be given before any affect is produced. The dose will be in a large measure regulated by the gravity and locality of the proposed operation. For example, there would be a much less quantity used in removing a small atheroma from the head than in amputating a limb.

In facial neuralgia, five drops inserted at the painful points, and the oleate rubbed over the surface, has often proved useful. Small cystic tumors about the head and face

have been painlessly removed by injections around their base. Plastic operations can be performed if the injections be some distance apart and external to the line of incision. Hypodermically it has failed to relieve colicky pains, but has been successfully injected in severe pains in the groin during dysmenorrhea. In rigid and tonic contraction of the sphincter ani, five minims have been injected into the muscle with good results; also in abscesses of the rectum the pain and weary feeling have been greatly benefitted, the pleasant effect lasting from four to five hours. In vesicovaginal fistula a few minims injected around the fistula rendered the part perfectly insensible to the sutures.

Having read a good deal about the effects of cocaine when taken in large doses hypodermically, I determined to try it upon myself. So, with the kind assistance of Dr. Edward McCarthy, who took the notes of the experiment, the following was observed:

At 4:45 P. M., pulse 88, before beginning the experiment.

At 5 P. M., one-fourth of grain in 6 minims of water injected in the left forearm on the radial side, just about where the external cutaneous nerve from the brachial pierces through the ante-brachial fascia.

At 5:14, some slight tingling in the little finger, which may have been caused by resting the arm heavily on my knee.

At 5:15, a quarter of a grain was injected about one-eighth inch apart from the first.

At 5:30, a quarter grain more. No pain on the insertion of the hypodermic needle.

At 5:40, pulse 110, slight perspiration on the forehead, and a little nervousness.

At 5:45, a quarter grain. No special symptoms, except slight restlessness.

At 6:05, a half grain was injected without once feeling the needle. The whole left arm feels numb and heavy; the hands moist and cool; the pupils dilated immediately after injection.

At 6:10, pulse 114, slight ringing in the ears, and a vacant feeling in the stomach.

At 6:30, a half grain was injected; the needle not felt. Pulse 120. A very dry feeling in the mouth and throat.

At 6:40, pulse 114. I have a drowsy, sleepy feeling, and

head feels heavy. Respiration 25 per minute; temperature 100. Pupils well dilated, the *right* more so than the left. The face is slightly flushed, and the skin moist and clammy.

At 6:50, a large sewing-needle was slowly introduced three-quarters of an inch straight through the skin, fascia and supinator longus muscle without the least pain, and only a slight feeling of pressure; but when it reached the periosteum of the bone, it caused intense pain, as if something was gnawing at it.

At 7, half grain more was administered. Pulse 120. Hands cold.

At 7:35, took hypodermically another half grain. Pulse 120. Great ease in breathing. Marked perspiration on the forehead.

At 7:45, pulse 120; temperature 100°F.; respiration 28. The hands still cold, and a slight headache. The area of complete insensibility is well defined, and measure 2x4 inches, having an elliptical form. All of the above injections were put in a space about the size of a ten-cent piece, the needle directed towards the elbow, and the skin held between the fingers in the usual way. The area of sensibility is perfect for a quarter of an inch *above* the point of insertion; but here the line is very sharply drawn, which might point to the fact that the cocaine was carried to the extremities by the *arterioles*. Moderate degrees of heat and cold were not noticed in the slightest. A lump of ice placed on the arm was not felt, until some of it had melted and trickled down on the ulnar side. A piece of metal heated almost to redness—in fact, so hot as to scorch the hairs and raise blisters—could only be felt after contact of two to three seconds, when the pain, although not intense, was dull and perceptible.

At 8:05, a half grain was injected with the needle pointing towards the fingers.

At 8:12, pulse 120; temperature 100; respiration 28. The area of insensibility has a pear shape, and measures 4x6 inches.

At 8:35, another half grain injection. Pulse 116. Continued dryness about the throat, and extreme ease in breathing, with an inclination to sigh frequently.

At 9, still another half grain injection. Pulse 116; temperature 99 $\frac{3}{4}$ °. A needle introduced down to the bone in several places caused not a particle of pain. The pupils equally dilated, and responsive to light. Slight twitching of the muscles in various parts of the body. The headache is quite severe.

At 9:25, pulse 120. Head full and heavy. Respiration is principally thoracic, very superficial, and delightfully easy. Voices sound distant, but there is a general feeling of well-being. The anæsthetic area is undiminished. No feeling of nausea or dizziness at any time. Hands still cold and clammy. The sensibility of the mucous membranes of the eye, mouth and nose not perceptibly diminished. There is continued dryness of the throat. There is a feeling of great wakefulness, accompanied by a weakness in the legs when walking.

At 11 P. M., the general symptoms are much less marked in every way. Area of insensibility greatly decreased. Headache much better; only the superficial breathing continues.

Resumé.—To bring out the principal points, I will restate, in four hours $4\frac{1}{2}$ gr. in \mathfrak{Z} ij of water were injected into the left forearm, resulting in a complete anæsthetic area measuring 4×6 inches, and extending one-half to two-thirds inch in depth; headache, clammy perspiration on forehead and hands, the latter cold; dilatation of the pupils, weakness in legs, accelerated pulse, rise of temperature, very superficial breathing, and dryness in the mouth and throat.

Dr. J. Leonard Corning, of New York, has shown, by a number of experiments that the local effects of cocaine can be almost indefinitely prolonged by any of the following methods: (1) After an injection of five minims of a four-per-cent. solution, an Esmarch's bandage was applied above the puncture, and in a few minutes the anæsthesia had extended for several inches. (2) After exsanguination and application of Esmarch's bandage, and then an injection, the anæsthetic area was very circumscribed. (3) An injection into the limb, and *then* exsanguination with Esmarch's bandage above the point of injection. Of these methods, the third is considered by Dr. Corning the best. This plan can be applied in surgery to all the extremities. If a limb is to be amputated or a joint resected, then a deep injection is necessary. The advantages are: a very small amount of cocaine is required, very little blood is lost during operations, and the effect can be prolonged *ad libitum*. In removing small tumors from the head or body where the bandage cannot be applied, stout wire rings, covered with rubber and fastened with long

straps, may be used, to compress the surrounding parts and prevent the cocaine from being carried away in the blood.

Determined to test the methods of Dr. Corning, Dr. McCarthy injected a half grain in ten minims of water in my right forearm on the radial side. This was followed in five minutes by exsanguination of the arm from the fingers, making a long skip with the bandage at the point of injection, and compressing the brachial artery above the elbow. Before applying the bandage, the area of anæsthesia was $1 \times 1\frac{1}{2}$ inches; twenty minutes later, after compression of the artery, it was only $1\frac{3}{4} \times 3$ inches, which gradually diminished. After the effects of this had worn off, the brachial artery was compressed above the elbow, and *one-quarter grain* injected into the ulnar side. Twenty minutes later a large sewing-needle was inserted one inch straight into the arm without the least pain. Thirty minutes after the injection, the anæsthetic area was 5×8 inches for superficial and deep pricks of the needle. This method seems to have decided advantages over the first. In order to see what effect a deep injection would have, the artery was compressed as before, and the hypodermic needle inserted one inch straight into the tissues, and then *one-quarter grain* slowly injected. Eight minutes later, the anæsthesia had only a diameter of half an inch long. In testing the sensibility in this experiment, the ulnar nerve was evidently injured, as proved by the fact that on introducing the needle, an intense pain shot down the ulnar side of the arm, and that side was perfectly numb for more than forty minutes. As the area of insensibility did not extend, and the soreness of the flexor digitorum communis increased, this method of very deep injection was abandoned.

The opposite of this was tried—namely, a very superficial injection of *one-quarter grain* just under the skin after compressing the artery. The area was long and narrow. Six minutes after injection, it measured $2 \times 3\frac{1}{2}$ inches; fifteen minutes later, $2 \times 6\frac{1}{2}$ inches.

Medical Examiner: "What did your father die of?"

Applicant: "Oh, just *plain* death."

ART. II.—**Cocaine in General Practice.** By ROBERT D. MCILWAINE, M. D., Petersburg, Va.

It seems almost a work of supererogation to have anything more to say of the salts of cocaine and their uses; yet, having used them with great advantage to myself, and relief to my patients in some minor surgical operations, I shall cite them. In all the cases cited the hydrochlorate was used.

Case I.—Having recently been called to see a patient considered by all her friends a confirmed invalid and beyond hope, I found on examination a complete fistula-in-ano with five suppurating sinuses. She was in a very low state of health from this constant drain upon her system; and contrary to the diagnosis of her former physician, I found her lungs perfectly sound. I proposed an operation and gained consent, assuring the patient little or no discomfort would be experienced, and, moreover, no ether nor chloroform should be used. Forty minims of a four per cent. solution of the hydrochlorate was injected in the area of the sinuses, and without the least pain, only a dragging sensation. All the sinuses were slit up—the principle one through the gut. Antiseptic dressings were employed; and in two weeks the patient was up and about, though, of course, feeling a little discomfort from the cutting. This was undoubtedly a case requiring either ether or chloroform, the use of either of which would have been extremely risky.

Case II.—Through the kindness of Dr. Leigh, of this city, I again had the opportunity of using cocaine in complete fistula-in-ano. In this case there were two sinuses, opening about two inches apart. The solution was injected along the course. We found, on probing, the direction the sinuses went, and after waiting fifteen minutes these too were slit up through the gut, the patient all the while straining her neck to see what was going on. This case, too, is progressing well, and is loud in praises of the painless operation.

Incomplete fistulæ, we all know, and sometimes complete, can be easily opened up without etherization; but the above were undoubtedly cases requiring anæsthetization, and in either case would have been attended with considerable risk.

Being attending physicians to a large tobacco factory in this city, necessarily I have come in contact with many venereal cases; and on those with suppurating buboes, after having

had fifteen cases of complete success, I invariably use the injection of cocaine. It enables me to lay the buboes open thoroughly and wash out with a bichloride of mercury solution, after which I pack with iodoform. In these cases hardly any pain is experienced, and the work can be done more satisfactorily than otherwise. In my cases only four have complained of much pain.

Another point that may be considered trivial, and even bad practice by some, but which I have found to be useful: I always drop a few drops of the cocaine solution on a chancre before cauterization, and find by so doing that the chancre can be thoroughly destroyed before any sense of pain is experienced. My reasons for burning chancre are those of Otis, than whom none stands higher on such points; and even if the burning be considered trivial it certainly makes the physician more popular *who can do it without pain* than him who cannot or does not.

Besides, in the above classes of cases, I have used this most valuable and timely medicine in removing fibrous and fibro-cartilagenous tumors, in injecting piles, and almost invariably it has given entire satisfaction. Its use in operations on the eye is familiar to all, and to its complete success in such cases we can testify.

We are convinced that *in general practice* cocaine has not the practice it deserves; it should be used more extensively, when its virtues will become apparent to all. And now, too, it is comparatively inexpensive. Occasions on which it should be used are too numerous to mention, and it should as much be a constant companion of practitioners as morphia.

We have only seen two cases in which any untoward symptoms set in, and these were easily overcome by the use of stimulants.

To Disguise Taste of Quinine.—A recent number of the *Canada Lancet* says: "Tannin, gr. jss, will neutralize the bitterness without changing the action of quinine, gr. x."

ART. III.—**High Temperature in Sun-Stroke (Thermic Fever).**

By JOSEPH JONES, M. D., Professor of Chemistry and Clinical Medicine, Medical Department, Tulane University of Louisiana; Honorary Fellow Medical Society of Virginia; Visiting Physician Charity Hospital of New Orleans, La., etc.

Two cases of sun-stroke occurred during the year 1872, and were brought into the Hospital, with high temperature, marked capillary congestion, and nervous muscular prostration. One of these cases terminated fatally within twenty-four hours after entering the Hospital; the other case recovered.

In one case of sun-stroke, which occurred during the month of July, 1878, in which the temperature was noted, it was found to be 112°F. in the axilla at the time of death.

The phenomena characteristic of thermic fever (*sun-stroke*) appear to be dependent, in a large measure, upon the complex and unstable composition of the blood. Like all complex and highly elaborated organic fluids, which are continuously supplied with oxygen, the blood can maintain a definite physical and chemical constitution only within certain degrees of temperature. Unless a definite physical and chemical constitution of the blood be maintained, the necessary nutritive elements will not be supplied to the organs and tissues, and alterations in the secretions and aberrations of the muscular and nervous forces will result. When the temperature of the blood rises above a certain degree, not only is the amount of carbonic acid increased, and the cerebro-spinal and sympathetic systems affected injuriously thereby, but it is also probable that a new series of chemical actions are developed, and compounds are generated which act as poisons to the nervous system. The irritability of the heart is rapidly exhausted by high temperature.

The rapid and extraordinary rise of temperature in the blood, characteristic of thermic fever (*heat-stroke—sun-stroke*), must also be attended with disturbances in the normal electric currents in the nerves and muscles.

The great increase of carbonic acid, and the corresponding consumption of oxygen, and the rapid generation of urea, and of other excretory products, the alterations of the hæm-

oglobin and fibrin; and the dilatation of the capillaries, and the parnic congestion of the internal organs, but more especially of the brain, spinal cord and liver, must also be regarded as important factors in the state known as *sun-stroke*.

As far as the experience of the author extends, sun-stroke is less common in New Orleans than in New York, Philadelphia, Cincinnati, or St. Louis. This difference appears to be due to the more uniform temperature, the large masses of water penetrating Louisiana in all directions, the prevalence of cool Gulf breezes in the summer months, the wide streets, the construction of the habitations largely of wood, the large size of the dwellings, and the absence of crowding in most parts of the city.

ART. IV — **Injuries to the Brain Associated with Injuries to the Skull—Spinal Injuries.** By EDWARD C. MANN, M. D., Member New York County Medical Society, Superintendent "Sunny Side Home for Nervous Invalids," etc., Brooklyn, N. Y.

The gravity of wounds of the skull depends of course entirely on the amount of damage done to the brain. We may have compression, concussion, laceration and inflammation as the four kinds of injuries to the brain from wounds of the skull.

The mere shaking up of the brain fibres constitutes principally the pathological condition of *concussion*. The brain is paralyzed for the time, and the symptoms present themselves in two stages, primary and secondary. The first symptom is vacancy and stupor, and this diminishes after a while. This has the effect of making the pulse rapid and feeble, and we also have a cold, clammy surface of the body. The pupil is contracted more or less, while the body is in a state of complete relaxation. The breathing of the patient is natural. The symptoms now begin to ameliorate, and vomiting, which is a favorable sign, sets in. This is the second stage, or stage of re-action. The patient's consciousness returns, and he begins to be very restless and complains.

These symptoms generally go on to a favorable termination; but sometimes *inflammation* will set in, and we have a re-action. In such cases (those of re-action), and especially in cases of children, the brain is unusually active and irritable and the child is precocious, but he must be carefully looked after and nursed.

The phenomena in injuries of the skull, we should remember, are generally a combination of those of compression and concussion. The phenomena of *concussion* are as follows: Stupor, partial and diminishing; pulse feeble; pupils contracted; breathing natural; the surface cold; muscular relaxation; restlessness and vomiting.

The phenomena of *compression* are: Stupor, complete and increasing; pulse full and slow; pupils dilated; breathing stertorous; surface warm; muscles natural; paralysis; convulsions.

When we have a *protrusion of the brain* in fractures, we must treat the granulations in the same manner as the granulations of any other part. When the protrusion is from healthy brain substance, we have a fungous growth without cerebral symptoms. When the brain has been *lacerated* and protrudes, we have a different kind of fungous growth. It is an unhealthy, weak granulation, and death is pretty certain. This weak granulation bleeds on pressure, and there is a good deal of inflammation. We can cure the granulations in the first case as we would cure any other healthy granulations. We may repress and destroy such granulations, but the unhealthy granulation cannot be cured. We should never close up a scalp wound until we are sure that there is nothing serious.

If a depressed fracture is compound and without symptom the treatment will depend on the line and extent of depression. If there is abrupt and considerable depression, we should trephine. It is admissible in a depressed compound fracture, with very slight symptoms, to wait a little while and watch the symptoms. If, after waiting about a week, there are no serious symptoms, we need not trephine. The general rule in punctured fractures is to trephine. We want to be sure that we have compression before we operate. If

we are sure that compression exists, we should always operate.

In wounds of the membranes we should prevent, with a gentle compression, the protrusion of the brain, and we should remember that these wounds are very liable to inflammation.

In wounds of the brain itself, we must give all the destroyed brain substance a chance to come out, and not shut it up. Foreign bodies in the brain are very difficult to reach and treat.

In case of a pistol shot, we should be very careful not to push the bullet farther into the brain in our endeavors to extract it. Yet it is of great importance to get any and every foreign body out of the brain substance in which it may have become imbedded.

In concussion of the brain, we should see that the patient does not suffer any further shock to the nervous system. We have compression caused by extravasation of blood between the membranes, between the membranes and the brain, and into the brain substance. In such cases, we shall have to trephine if we know where the blood is. In laceration of the brain, our hands are tied, and we can do nothing. In inflammation, we may employ local bleeding, counter-irritation, application of cold to the head (dry cold), and I deem mercurials very valuable in quieting inflammation, in conjunction with the bromides, *pro re nata*.

Spinal Cord.—We have on the spinal cord all the effects produced, which we have on the brain, viz: Compression, concussion, laceration, and inflammation. The accidents happening to the vertebræ are serious principally by the effect produced on the spinal cord, and we may have serious and eventually fatal concussion of the cord without apparent mechanical lesion. An injury (localized paralysis) may implicate one part of the cord and the remainder of the cord may not be implicated. If we have injury of the lumbar vertebræ we have paralysis of the lower parts. If we have a fracture of the dorsal vertebræ, we have paralysis of the abdominal muscles, etc. If we have complete and immediate paralysis, we arrive at the conclusion that the cord has suffered from compression or laceration. If we find the paralysis coming

on in a few hours, or perhaps days, we think that extravasation of blood has taken place into the spinal cord. We must put our patient on his back and take good care of him. We must look carefully after the bladder, kidneys and bowels, and be careful not to let our patient get up a cystitis. Use the catheter and wash out the bladder with tepid water. It will be wise to put such patients at once in a water or air-bed to avert troublesome bed-sores, which might induce inflammation and finally mortification.

We should remember that, as regards the brain, the compression which is produced by inflammation does not cause death for a week or more, but compressions which are the effect of fractures cause mischief and death immediately. Owing to the intensity of the shock to the brain, fractures at the base of the cranium are usually fatal. These fractures may take any direction and present themselves with evidences of an injury to the brain. The diagnostic symptoms of such an injury are the discharge of blood from the ear, and also from the nose. If the petrous portion of the temporal bone is fractured, we shall get considerable hæmorrhage from the ear, while a fracture of the cribriform portion of the ethmoid bone would be followed by nasal hæmorrhage. Discharges of water in large quantities through the ear is also an indication of fracture through the base of the skull. This fluid comes from the sub-arachnoid space which is filled with the cerebro-spinal fluid.

204 *Lefferts Place.*

ART. V.—**Heredity—Preliminary Considerations.*** By M. A. RUST, M. D., Richmond, Va.

“The very image of his father.” This remark may be heard in all tongues and regions, and has undoubtedly been heard during uncounted ages, since primeval man began to recognize a relationship between a child and a definite father.

The first cognizance of the facts of heredity was acquired

* Read before the Richmond and Surgical Society, July 27th, 1886.

by primitive man, when, emerging out of lowest savagery, and passing from a predatory to a productive mode of life, he rescued from wildness and subjected to his will and wants certain species of animals, which remain in the train of man to this day. Domestication of animals involved breeding controlled by discernment and selection—as we are told of Jacob, that he selected ring streaked, speckled and grizzled rams to leap upon *Laban's* cattle. Philologists tell us that in the ancient Hebrew literature seven different terms are met with by which cattle are designated. This evidently shows the raising of at least seven different breeds. But those famous Semitic tribes of shepherds who, with their flocks, roamed the Arabian wilderness thousands of years before our era, were by no means the first to offer proofs of the first domestication of animals by man; such evidence, for instance, is likewise to be found in the remains of the Pfahlbauten (pile or lake dwellings), which were inhabited by a race whose very name is lost to us.

As far back as we can retrace the steps of man through historic times, we find him sufficiently advanced in his evolutionary course to be capable of reflection and of inquiry into the causes of the phenomena he daily perceived. The facts of *heredity* which he had recognized in regard to domestic animals were likewise recognized in regard to his own kind, not only in their physical, but also in their psychological aspects. We read, for instance, in the venerable old stories, how the sons of God became fascinated by the beauty of the daughters of man, and how these celestial gallantries resulted in the birth of giants, who kept on mingling with the Adamites and peopled the earth. A depraved race ensued, and in the course of time evil and wickedness became so great “in the earth,” that the total destruction of the whole race of men was resolved upon.

Legends of this kind are generally a true reflection of the light in which things appear to the contemporaneous mind. Had not the facts of heredity, even at that early time when the tale originated, already taken firm hold upon the minds of men, the narrative would have assumed a different shape—*e. g.*, the destruction of the old wicked generation, and the

sparing of the young, or at least of the innocent babes, would have appeared to the listeners the right thing to do. But believing, as they did, in the transmission of wickedness by heredity, and that *like* invariably begets *like*, and that every chip of the old block must become a repetition of the old block itself, no other corrective method, no other remedial agent short of the destruction of the whole race could prove satisfactory.

Nearly 3,000 years ago, we find, as represented in the "Laws of Manu," the Hindoos divided into four classes or castes, corresponding to the original creation of types of men. From these four castes, the first—the Brahmins—issued from the mouth of Brahma, and stand above all other mortals; whilst the fourth and most abject caste, whose mere touch makes a Brahmin unclean, issued from Brahma's foot. We are also told in those books that the distinctive characters of each caste are hereditarily transmitted, and that no offspring of a lower caste is able to conceal his descent. Had not inherited difference of the life-blood of men been regarded as a natural necessity, and had not that difference formed a part of the religious beliefs, the down-trodden caste would never have submitted.

Traces of hereditary class-distinction can be found in many nations of antiquity. Amongst the Hebrews the tribe of Levi was regarded as endowed with certain hereditary qualities, which rendered it pre-eminently fit to act as special attendants and propitiators of the Deity.

In the Laws of Lycurgus, the facts of heredity are fully recognized. Amongst other things—*i. e.*, old or decrepid husbands are authorized to lend their youthful wives to robust and younger men, so as to secure a more vigorous progeny, etc. Thus, the experience of the continuous reproduction of the specific characters and traits—an experience first made in regard to domestic animals, and later in regard to men—has, since time immemorial, and in all languages, crystalized into certain popular sentences and adages, such as in English, "Like begets like," "a chip of the old block," and so forth.

But is it invariably so? To return to the sentence at the

head of this paper, is the child always the image of his parent? Very often it is; sometimes it is not; and occasionally it may happen to be the image of a strange person—*i. e.*, of a defunct first husband of the child's mother; or, as is at times observed, an ebon daughter of Africa, married to a gentleman equally swarthy, brings forth a mongrel child. On inquiry, it is found that a long time before her marriage the gay sons of the white man had come in unto her.

Heredity, which to the generality of men means nothing more than the reappearance of bodily, mental, abnormal or morbid parental traits and peculiarities in the offspring, is regarded by the man of science as the most wonderful and perplexing of all the phenomena in the animated world. Along with the progressive evolution of mind, each successive age has endowed, and continues to endow, the repositories of human thought—the spoken word—with new or wider meanings. Thus the last thirty years have exalted the word "*heredity*" to momentous significance. In addition to what it formerly conveyed it means to-day—a mysterious force by whose co-operation all forms of life, as now beheld, have come into existence. It implies the wonderful physiological function by which every living organism is storing up in its reproductive molecules, and is transmitting through them to its descendants its own morphological, structural and functional characters.

In regard, moreover, to the highest animals, and especially men, we have to conceive the almost inconceivable transfer of a world of mental traits and characters which, in the female, have to pass from the brain-cells into the ovum, and in the male, from the brain-cells through the spermatic plexus into the sperm-cells; all these inconceivably minute mechanical transfers, all this infinity of molecular arrangements and potentialities, the rich dower from both parents (besides many bequests from ancestors, tribe and race)—to be conjointly stored and crowded in the fecundated ovum—a minute speck of protoplasm invisible to the naked eye, and in which, even with the aid of the most powerful microscope, no trace of organization is discernible! Says Dubois-Reymond: "If we *could* imagine the head of a spermatozoon as large as the

Great Eastern, and the whole space represented by it filled with a wheel-work as fine as a lady's smallest watch, our figure would still be far from giving any kind of representation of the ultimate division of matter." Forsooth! in this minute speck of jelly under the microscope, the scientific mind reverently perceives greater and more overawing wonders than in the thousand-and-one tales of miracle-mongers of all ages.

From the few foregoing remarks, it must already appear manifest that *heredity* rests on reproduction, and that the study of it cannot be separated from the study of the process of reproduction.

Sexual reproduction, production of descendants from eggs fertilized by a male, is the general rule amongst all higher organisms. Nevertheless, parthenogenesis—immaculate conception—is a reality. For a tangible example we must not go to the vertebratæ (to which also man belongs), nor to mythology or theology; but we must descend to the insect world. With many species of the arthropods, the virgin female possesses the inherited power of reproducing descendants without sexual union with a male. In every garden, on grape-vines and rose-bushes, one can see, with the aid of an ordinary lens, amongst the tribe of aphides, or plant-lice, which reside thereon, the virgin lice giving birth to living children! The act of parturition does not in the least disturb the virgin mother louse while sucking the life-sustaining juice out of the leaf to which she clings. The young louse comes into the world by breech presentation, the tiny limbs pressed closely against the body. In a moment the legs are disengaged, the head follows, and the little being, leaving the maternal lap, already thrusts her proboscis into the nourishing leaf. If conditions are favorable, ere twelve days elapse, she, the young daughter, in her turn will be a mother.

Bonnet (1745) was the first who, by exact researches, conclusively established the then much-disputed fact of parthenogenesis. Taking a new-born aphid, keeping and rearing it in cloisteral seclusion and stainless chastity, he saw this maiden louse, on the eleventh day of her life, give birth to a

living daughter. During the next twenty days the same young louse gladdened his heart with ninety-four additional daughters, who, in their turn, being kept in strict seclusion, beyond all chance of access to a male, produced descendants in astonishing numbers.*

Wonderful as this phenomenon must appear, there is in it nothing miraculous, nor anything inconsistent with the laws of nature. The aphid lives only through one summer; at the approach of winter the whole population perishes, and the species would be extinguished were it not that, through variation, adaptation, and heredity, another not less marvelous modification had been evolved. As autumn advances, the number of births, hitherto daughters only, decreases. At intervals males are born, and also unwinged females larger in size. The females pair with the males, and lay their eggs on the lower part of the stems, under dry leaves, on protected spots of the ground—and then die. The first warm rays of spring hatch the eggs; the young (all of them females) affix themselves to the first sprouting leaves, and soon, without any contact with males, commence bringing forth living daughters, as above described.

Thus this provision for hibernation preserves the species, and thus the autumnal mother-louse transmits as inheritance to her offspring, and to all successive generations, certain particular molecular motions and arrangements resulting from her intercourse with a male; or, in other words, she transmits, through her productive molecules, to the germ-cells of her offspring (germ-cells not differing from others), the faculty to develop, without fertilization by a male, into new individuals.

The comprehensive sentence of Harvey—“*Omnia vivum ex ovo*”—announced a century in advance of Wolf’s discovery of the mammalian egg, and prevailing during two centuries, no longer covers the ground. It is replaced by Virchow’s wider axiom—“*Omnia cellula e cellula.*” Beyond that there is no pathway, unless a coming Prometheus should steal an-

*The start once given, other naturalists engaged in analogous researches. Schæfer, in 1775, demonstrated the existence of parthenogenesis amongst water-fleas, and recently we have learned through Siebold that parthenogenesis is widely spread amongst the large class of insects.

other spark from the Olympian fire, and sit down framing protoplasm in defiance of the gods.

A *sexual* reproduction preceded *sexual* reproduction—the latter being evolved from the former. Descending lower in the scale of animated matter, we meet with numerous classes of beings who have retained their primitive simplicity of organization, and in whom, consequently, no organs of reproduction have been evolved. With them reproduction and heredity become manifest through *gemination* or *budding*. The superfluity of material assimilated accumulates at a definite part of the body, where a specialized molecular arrangement appears in the shape of a *gemmule* or *bud*. This bud soon becomes detached, and begins life as a new individual, showing all the characteristics of the parent organism, whilst the latter, the mother organism, retains its own individuality.

At the lowest point of the scale we meet with the *protozoa*—the simplest imaginable forms of life. Each individual consists of a homogeneous speck of protoplasm without a trace of differentiation or organization. With these beings, propagation seems to be only a mode of growth—"a growth," to use the pointed words of Hæckel, "beyond the limits of the individual." Here we see multiplication effected by *division*. The individual grows to a certain—as it were—predetermined size, when the molecular coherence becomes loosened in the central line, and the homogeneous speck of matter divides into two similar halves, each half repeating the process. Seeing this, one might well put the question: Which is the mother, and which is the daughter? Here we behold the pageant of perpetual juvenility and unfathomable age.

The protozoa, as now existing, have existed from a period of our planet's history inconceivably remote, presumably since the beginning of life. From them all subsequent forms of life have descended. In the whole existence of those beings there is not a moment which could be construed into death, unless it be the act of division. But what is it that dies here? True, the protozoon may be destroyed by outside agencies; a drop of a modern antiseptic will put a speedy

end to its immortality; but in its body no provision exists for natural death. Had there been an arrangement for natural death, this arrangement, since the body of the protozoon is an undifferentiated, homogeneous mass, would, on division, have been transmitted as well to the one half as to the other, and thus the flame of life on this earth, scarcely kindled, would soon have died out; progressive evolution—the development of the wonderful tree of life, the unfolding of its myriads of ever-blooming branches—would have remained (anthropomorphically and metaphorically speaking) the idle dream of a God!

How came it to pass that this immortality was lost! We can only conceive one answer: it was lost through variation and adaptation.

Variation (variability or mutability) is an inherent, fundamental property of protoplasm—equal in importance to heredity. In the household of animated nature, heredity constitutes the conservative; variation the progressive principle. Without the action of variation, the world would now be peopled, as it was millions of years ago, by the lowest and simplest forms of life—the protozoa. In everything that lives, from the microscopic cells to the giant creatures, variation is ever present, ever in action. No two leaves, no two noses, are perfectly alike among the myriads of leaves and noses which are and have been. We wonder at the infinity of such variations; but seeing the almost miraculous power possessed by every organism, the power of taking into itself a variety of dead matter (food), and converting it into living matter—into its own substance—our wonderment would not be less should we find these conversions always executed with unvarying, mathematical sameness.

All variation, at its first start, is extremely minute, and scarcely perceptible. Thousands upon thousands of variations appear and vanish, because of their failure to meet with surroundings fitted to stimulate development. But if once in a thousand times a variation arises in a fit medium, and makes the fit adaptation, it becomes fixed in the organism, develops and branches forth in every direction, and is, in

ever-increasing proportions, hereditarily transmitted. After sufficiently long lapses of time, it will appear as a new species, class, or order.

Diseases, likewise, are but cellular variations. Amongst the millions of cells in a complex organism, certain slight variations from the normal constantly occur, and come to naught for want of fit surroundings. But given the suitable medium, the most trifling variation will be nursed by it into a subsistent anomaly, into a structural or functional alteration, into a pathological product, morbid growth, etc., and the corresponding changes of molecular structure, the aptitude for certain morbid modifications will be transmitted by heredity.

New evidence of this relation of medium to organism has been furnished by the recent discoveries of Koch, Pasteur, and others—discoveries which enable us to cultivate at will certain classes of microbes into malignity or innocence, by simply placing them in different media.

When we shall have attained to a better knowledge of the relations between environment and cellular variation, lead-pencil and prescription-blanks will no longer constitute an indispensable equipment for the daily walks of the physician.

But to return to our subject, let *imagination*—the wonderful power without whose co-operation the loftiest conceptions of science would have no existence—carry us far back into the measureless past, into a geological epoch, when (leaving the consideration of plant-life aside) the mono-cellular organisms, the protozoa, had the earth all to themselves. We cannot think of protoplasm existing without variation. Numberless variations must have arisen, dwindled, and died out, in default of a suitable medium. But in the course of time—and we have limitless time at our disposal—a variation must have taken place manifesting itself in a tendency in sundry hermit cells to agglomerate. When it arose in fit surroundings, it developed on a larger and more varied scale; cell-agglomerations sprang up in every direction; the aptitude for social life became an inherent attribute of those cells, and was hereditarily transmitted. They associated in

clusters, groups, colonies, communities of ever-increasing complexity; in profusion of forms, of which, for the time being, man appears as the culminating point.

Social life, in the multi-cellular organisms, led to differentiation of the cells—to division of labor. Each individual cell, or group of cells, living its own individual life, assumed its special part of the physiological functions required for the building up, maintenance and preservation of the community, all hands in mutual connection and interdependence, executing their work with precision and harmony, as if under the guidance of a hidden director.

A comprehensive illustration, in this respect, is afforded by the hen's egg, which lies within everybody's reach. Here we can follow with our grosser senses these wonders. We can follow them, step by step, from the first splitting of the initial cell into 2, 4, 8, 16, and so on to myriads; from the differentiation of *blastoderm* into *exoderm* and *entoderm*, through all the subsequent differentiations and specializations, till the completion of the hopeful chick. Every one of us, at the beginning of his life, has gone through the same process.

Calling up before our minds the throng, the bustle, the hurry and flurry of cellular life, with its unceasing multiplications, we should, *a priori*, conclude that in such complex organisms, waste cells and waste tissue had to make room for new cells and new tissue, that constant renovation and rejuvenation must be a primary vital condition of the multi-cellular organism. *Death* was evolved in these organisms as a necessity, as a most fitting adaptation to environments; it became an invariable, inseparable concomitant of life, without which life could not subsist, except in its lowest form. Death is our immutable, unalterable and inalienable ancestral patrimony; and no truth is so universally acknowledged as Paul's saying—"It is appointed unto all men once to die."

Nevertheless, viewing the subject from another standpoint, it must be admitted that the immortality of primordial times is not totally lost. When, in the evolution of the multi-cellular organisms, the differentiation into somatic and propagatory cells took place, the latter preserved for themselves their share of ancestral immortality. By the unceasing transition

of parental substance, by the constant transfer of reproductive molecules to gemmules, germs and ova, the thread of life has been spun, without break of continuity, from the dawn of life to the present day—from protozoa to man; and as our being is but a continuation of ancestral life, so we ourselves continue to live in our children. And here we have arrived at the bright spot, radiant with hope and promise, where young science and old traditional belief can heartily shake hands over the chasm which holds them asunder.

[TO BE CONTINUED.]

ART. VI.—**Remarks on the Uses of Papine.** By WM. J. CRITTENDEN, M. D., Unionville, Va.

In the practice of medicine we are often called upon to treat patients who possess a peculiar idiosyncrasy as to the effects of opium or any of its preparations.

During January, 1886, I was called to see a lady suffering with acute peritonitis. She assured me that she could not use opium, as she had tired of it previously. But I gave her one-eighth grain of morphia sulphate and one hundred-and-twentieth grain of atropia sulphate hypodermically, and in a few minutes the depressing effect was noted, both upon the respiration and circulation; the pupils also became visibly contracted. I then tried the various usual substitutes for morphia in succession, but to no effect. I determined to try papine; but not being able to give it by the mouth on account of nausea, and as she objected to the use of the hypodermic needle, I gave her two-drachms per rectum, and repeated it in one hour. The result was that she sank into a quiet, peaceful sleep, which lasted for several hours. During the remainder of her sickness I gave her papine, with the most gratifying results. As soon as her stomach would retain it, I gave it to her by the mouth in one-drachm doses.

I have also used papine in a case of uterine cancer, in lieu of morphia. In cases in which patients have been taking morphia until it has lost its anodyne influence, papine is well adapted.

Some time ago (in the absence of the family physician) I was called to see a lady one night, in great haste, who was suffering with malignant disease of the uterus. On my arrival the nurse informed me that she had given her a grain of morphia, with suitable percentage of atropia, every hour for five or six hours, and during the intervals she had given her chloroform, but to no effect whatever. Accordingly, I gave her xxx min. of papine with eighth-grain morphia sulphate, repeating it in fifteen minutes, and in a short time she fell asleep and slept for six hours, which was more than she had slept at a time for months.

In pneumonitis, pleuritis, and bronchitis I have found papine to answer an excellent purpose. In dysentery it is useful both as an anodyne and in relieving the tenesmus. In the diarrhœa of children I frequently combine with it bismuth subnitrate and prepared chalk. I have used it also in cystitis. In neuralgia, when I wish an anodyne, I use papine. As an anodyne it is equal if not superior to morphia; and I have never yet seen any unpleasant effects from its use. As a hypnotic I find it to be an agent of great value.

It is inferior to bromidia when we simply wish the effect of a hypnotic. But it fulfills the indications when we wish a decided anodyne as well as a hypnotic influence.

I trust that the readers of the *Virginia Medical Monthly* may give this drug a trial, as I feel that they will be amply repaid for their trouble.

Bromidia.

Maurice Hache, M. D., 8 Rue de Tournon Paris, May 18th, 1886, says: I have tried *bromidia* in two cases, one suffering from a slight febrile affection, the other a victim of acute insomnia; in the latter, various preparations of opium had proved useless and the administration of chloral was followed by lassitude and congestion of the head. *Bromidia* produced sound sleep in both of these cases, unaccompanied by any unpleasantness on awaking. In my opinion this preparation is destined to render good service, and I intend prescribing it whenever the opportunity presents itself.

Correspondence.

Dr. Warren Bey's Biographical Sketch, etc.—Dr. Watson and Mr. Bergh.

Mr. Editor,—As a former pupil and admirer of Dr. Edward Warren Bey., I am pleased to note that at an early day you will publish an engraving and biographical sketch of this distinguished North Carolina physician and surgeon. After the war was over, Dr. Warren, ruined in fortune, returned to Baltimore, and renewed the Old Washington University; and by his great personal popularity and brilliant powers as a lecturer drew 160 students the first session, and soon placed the college on a plain with the Old University. He was idolized by the students, who flocked thither from every Southern State, fifty of whom the first session were North Carolinians. The Doctor greatly appreciated this outpouring of Southern students to his lectures, and in the beginning of his introductory lecture in Concordia Hall on the evening of October 1st, 1867, well do I remember these words: "There are times when language is inadequate to express, or words to convey, the feelings of the human heart," and proceeded to deliver one of the most feeling and eloquent lectures I ever listened to.

The career of Dr. Warren since that time is one of which every North Carolinian may well feel proud, for no citizen of the State has a more brilliant record, and one which all may well regard with the highest admiration.

I therefore thank you for your intended purpose as intimated in your July number. Your remarks on Mr. Bergh and his allies are pointed and true. While their munificence was expended to prevent flagrant and uncalled-for cruelties to animals, I admired their system, which seemed to be of a quality not strained;

"It droppeth as the gentle rain from heaven
Upon the place beneath; it is twice blessed—
It blesseth him that gives and him that takes,"

but when they attempt to thwart scientific investigations, which has for its object the amelioration of suffering humanity, they go beyond all reasonable ground, and cannot sustain their cause before an enlightened public sentiment—for it will not do for

"Infirmary to neglect any office
Whereunto our health is bound."

T. G. E. MATTHEWS, M. D.

Ringwood, N. C., July 10th, 1886.

Proceedings of Societies, Boards, etc.

RICHMOND MEDICAL AND SURGICAL SOCIETY.

July 13th, 1886.—Large attendance—Dr. John G. Skelton, President, in the chair; Dr. M. D. Hoge, Jr., Secretary, in place. Several new members elected.

THERAPEUTICS OF COCAINE.

By appointment as leader, Dr. M. D. Hoge, Jr., read a paper on this subject [which we publish in full—see page 301, *et seq.*].

Cocaine in Ophthalmology, Otology, and Laryngology.

Dr. Joseph A. White first proposed a vote of thanks to Dr. Hoge for the admirable paper presented on the "Therapeutic Effects of Cocaine" (which was unanimously carried), a subject in which he was particularly interested, as not a day passed in his special practice of *ear, eye, throat and nose diseases* without some occasion for its use arising. Since it was first introduced, he has performed several hundred operations by its aid; and notwithstanding a very liberal, and possibly reckless, use of the drug, he had never observed any ill effects from it.

In treating *the eye*, he has performed cataract extraction, iridectomies, tenotomies, needle operation on the capsule, paracentesis of the cornea, removal of pterygium, of dermoid tumors of the cornea, of foreign bodies from the eye, of papilloma of the conjunctiva, and excision of tarsal cysts, with the utmost satisfaction. In *enucleation*, he has tried it once, and prefers chloroform or ether. In operations on the lachrymal apparatus, he has found it useless; also of no value in Sæmisch's operation for sloughing of the cornea. His experience did not correspond with the authors, referred to in Dr. Hoge's paper, who had observed ulceration of the cornea following its use. While superficial abrasion of the corneal epithelium nearly always resulted, he had yet to meet with ulceration. In referring to Dr. Calhoun's (of Atlanta) statement about his large percentage of failures following *cataract extraction* since he began to use cocaine, Dr. White thought it hardly fair to lay the blame on cocaine. He himself has operated on over *one hundred and fifteen successive cases of cataract* without one single failure, and about one-half of them have been performed with the use of cocaine. The success or non-success of cataract extraction is attributa-

ble more to the proper choice of cases, the preparation of the subjects, the mode of operating, and the after-care of the patients, than to the use or non-use of cocaine, which can hardly have anything to do with the result, if the solution is fresh and properly prepared. He always makes his solutions fresh for each case, with a proportion of bichloride of mercury, 1 to 5000.

In *ear* diseases, whilst not as valuable as in the eye diseases, it is of great service in neuralgia and inter-current pains; in earache from acute inflammation of the drum and drum head, and in operating on the drum-head and removing aural polypi. But he has found a four-per cent. solution of very little service, especially if any inflammation was present. When this is the case, he has observed that a ten per cent. or twenty per cent. solution is required to produce anæsthesia of the parts. Dr. White claims that he made this statement in one of the very earliest articles published on cocaine, and which was printed in the *Virginia Medical Monthly* (November, 1884), which was *one of*, if not *the* earliest, publications, as to its value in ear troubles. Subsequently to this, several authors denied its value in such cases, but it is now universally admitted.

In the *throat and nose*, it finds a vast field for its application. In the treatment of some forms of so-called "*catarrh*," Dr. White has found it of the greatest service. In the various operations performed for the relief of this common and unpleasant trouble, it is of daily use to him.

In removing nasal polypi—post-nasal vegetations, spurs, and out-growths from the septum, thickening of the turbinated structures, whether by snares, forceps, or by the galvano-cautery—cocaine renders the operation painless. In the treatment of *hay-fever*, he has not found it of any service, except as an aid in diagnosis and operative procedures, the production of a partial anæsthesia by it being useful in determining the sensitive points or structures, and a complete anæsthesia to perform the necessary operations or to make the proper applications.

Dr. White wound up his remarks by a reference to its value in *laryngeal troubles*, in enabling us, by the local anæsthesia produced, to make a more satisfactory examination, and even to perform operations that without its help would be almost impracticable. As an example, he reported a case of removal of a papilloma from the larynx of a child only *five years old*, and exhibited the specimen. For eighteen months the boy had gradually become hoarser until the

voice was entirely extinguished, and the breathing was so embarrassed that the child could not sleep without awakening every few moments in the alarming attack of dyspnoea. These attacks frequently came on in the day time also. Dr. White found a large papilloma growing to the anterior wall of the larynx just at the vocal commissure, and almost obstructing the glottic aperture. Thoroughly anæsthetizing the pharynx and larynx with a ten-per cent. solution of cocaine, he succeeded, after several ineffectual efforts, in grasping the growth with Mackenzie's antero-posterior forceps, and extracting it almost entirely. Some fragments remained behind, which were partially removed by forceps, and partially burned by chromic acid. In a child as young as this boy was—only *five* years old—such a growth would, in all probability, without cocaine, have necessitated an extralaryngeal operation for its removal, and hence no better example of the great advantages of cocaine could be presented.

Dr. White has observed that cocaine produces less effect when there is any marked inflammation, and that a seeming hyperæsthesia of the parts follows upon anæsthesia, as evidenced by the marked pain which appears when the effect passes off. He also exhibited a new spray for the economical application of cocaine solutions.

Cocaine for Removal of Enchondroma of Jaw ; Ingrowing Toe-Nails, and Amputation of Finger.

Dr. Richmond A. Lewis asked if the pain caused by electro-cautery, used in the nose while the patient is under general anæsthetics, as chloroform or ether, passed off when consciousness is restored?

Dr. White replied that in his experience the pain, on return of consciousness, was just as great as when no anæsthetic had been used.

Dr. R. B. Stover exhibited a cartilaginous tumor (or *enchondroma*) as large as the half of a turkey-egg, having two teeth in it, which he had removed from the front part of the alveolar process of the upper jaw of a woman, without special pain. In fact, she said it did not hurt. About half an hour before operation, he applied a piece of absorbent cotton large enough to cover the whole tumor, wetted with a four-per cent. solution of muriate of cocaine. This cotton he kept wet with the cocaine by several times pouring the solution on it. He was specially careful to keep the thoroughly cocained cotton well packed around the base of the tumor where his incisions were to be made. She made no com-

plaint of pain during nor after the operation. He applied some cocaine to the cut-exposed surface. On several occasions, he has removed *ingrowing toe-nails* without pain by the hypodermic use of cocaine under and around the nail, other than the pain caused by the first introduction of the hypodermic needle. The best method is to first pass the needle a short distance under and close up along the middle line of the nail, and inject a few drops of the four-per cent. solution; after waiting awhile, with the needle remaining in position, push it a short distance further, and inject a few drops more, and so on until the last drops of the ordinary syringe-ful are injected under the root of the nail. While this is being done under the nail, with another syringe, charged with a like solution, inject a few drops at various points around the margins of the nail to be evulsed. He has also *amputated a finger without pain* by the use of cocaine injected hypodermically just above the line of incision down to the line of the bone. [The agony of inserting the needle under the nail, it would appear, would cause almost as much pain as the simple operation of evulsion itself.—*Ed.*]

Dr. R. A. Lewis once used cocaine hypodermically around the margins of a toe-nail to be removed, but it failed to lessen the pain.

Dr. Hunter McGuire said he once used it to cut off a finger of a patient for Dr. J. G. Skelton, but he did not think it did any good. The pain of his incision seemed to be just as great as if he had not injected the four or five per cent. solution along the line of incision.

Dr. Skelton, however, thinks differently. Certainly the after-effects were much better, as the patient said, after Dr. McGuire had left, he was more scared than hurt, and that the wound did not hurt as it would have done had not cocaine been locally applied as a part of the dressing.

Cocaine for Hæmorrhoids, Internal Urethrotomy, Prostate Gland, Chronic Cystitis.

Dr. Hunter McGuire said that he had tried two teaspoon-fuls of four-per cent. solutions of cocaine to relieve pain in cases of operations for protruding piles, in high state of irritation, if not inflammation, but in every case he has had just as much pain as if he had not used anything at all. But when injected far up the urethra for internal urethrotomies demanded by old strictures, or when about to use the electrolytic apparatus according to his method for chronically enlarged prostate gland, or in treating chronic cystitis (first

injecting the empty bladder with an ounce or two of the solution)—in all such cases it renders operations almost painless. The anæsthetic effect does not last long—especially in cases of cystitis, which is probably due to the secretion of urine diluting or washing away the cocaine applications. The practical lesson he has learned about cocaine is that it is useless when acute active inflammation affects the part to be operated on. Secondly, it is practically useless when applied to thin tissues that have no material amount of cellular tissue about them. Thirdly, that it is valuable when operating on other tissues that are chronically diseased without acute inflammation—especially parts that are covered by mucous membrane, as polypi about the rectum, uterus, vagina, lips, etc. It is useful for warts, etc.

Cocaine Intoxication, Mania, etc., Valuable in Gynæcology, Venereal Sores, Earache, etc.

Dr. Hugh M. Taylor thought it was true that the extent of usefulness of cocaine was hardly realized, and that the impetus given this line of thought and practice, by its discovery, would result in the introduction of other agents possessing equal, if not greater, local anæsthetic properties. Already in *theine*, we had, it was claimed, a remedy which rivalled the honors of cocaine. But while so much was being said as to the great good accomplished by cocaine, he thought we should not lose sight of the fact that *it could also bring about much harm when unguardedly administered*, as exemplified in the cocaine habit—an evil which is becoming more frequent every day. Just as the unguarded use of chloral resulted, to an alarming extent, in the “chloral habit,” so it is becoming more and more so in regard to the use of cocaine. He had the truth of this assertion impressed upon him last winter by a lesson, the moral of which pointed to the cocaine habit as one of the dangers attending the internal administration of this drug for any length of time. The case referred to was that of a young physician, who while a student, had cocaine prescribed for him for some supposed kidney disease. The cravings of his system for more and more of the drug became more and more pressing. If his own knowledge warned him of his danger, he probably consoled himself with the reflection that his kidney disease was progressing, and more of the remedy which for the time being gave him relief was called for. For some weeks before he was seen by Dr. Taylor, he had been in Richmond on a protracted spree, and his conduct was so strange as to

give rise to the suspicion that he was insane. It was then discovered that he was taking cocaine hypodermically every few hours. When a stop was put to this, he became a raving madman; swore he would kill himself, and had to be watched constantly to keep him from carrying his threat into execution. His delirium finally became so violent that a commission of lunacy sent him to an asylum; but in a few days he made his escape and returned home. His brothers then took charge of him, confined him to his room, kept a guard over him constantly, and in that way finally broke him of the habit to which he was such a slave. For six weeks his ravings were represented as violent; and while in Richmond, his delirium was as acute and distressing as that from whiskey, chloral, opium, or chloroform.

In the field of *gynæcology*, Dr. Taylor thought cocaine was destined to continue to play an important part. The mucous membrane of the utero-vulvo-vaginal tract absorbed it readily, and there are few minor gynæcological operations which could not be performed with its aid alone as an anæsthetic. Recently he had tested its use as such in a case of *vesico-vaginal fistula*, and was more than pleased with the result. Absorbent cotton was saturated with a four per cent. solution, and left in contact with the vaginal opening of the fistula for several minutes at a time, and several times re-applied. Of course it was not a painless operation; the discomfort incident to the cramped position and the stretching by the speculum were sources of pain; but, as far as he could tell, the patient did not know when the cutting was done, nor when the stitches were introduced. He had never seen the operation done without an anæsthetic with as much ease to the patient or operator, and the amount of pain from all causes was insignificant as compared to the danger and troublesome after-effects of chloroform. He thought the introduction of cocaine was as much a boon to the practitioner of gynæcology and genito-urinary surgery as to the oculist, aurist, etc. With its aid most of the minor gynæcological operations could be performed. *Chancres, chancroids and warts* could be burned off or excised; strictures cut or dilated; and he saw no reason why it should not lessen the suffering incident to piles, fissures and ulcers of the rectum. He would commend its efficacy in some forms of earache, and mentioned the case of a patient with a *neuralgic earache* which would not yield to large doses of quinine and morphine, but which was in a few minutes relieved by a few drops of a four per cent. solution of cocaine poured into the meatus. The relief

thus afforded lasted for three or four hours, and was equally effective when the cocaine was re-applied.

Direction of Action of Cocaine, Time Required, etc.

Dr. Thomas J. Moore said he had had no experience in the use of cocaine in cutting out toe-nails; but from what he had read, as corroborated by the experience of Dr. Hoge, as detailed in his paper to-night, the anæsthetic effect of cocaine used hypodermically, takes chiefly the direction of the arteries—affecting the arterioles rather than the venules of the capillary circulation. He has somewhere read that in the extraction of nails, the cocaine should be injected around, but especially *behind*, the matrix—above and behind the nail. The effect being upon the arterioles, the matrix and extremities of the toe or finger becomes anæsthetized, and then evulsion is comparatively easy to the patient. Several injections should be thus made. About thirty minutes is the usual proper length of time required for the thorough anæsthetic effect of cocaine to be complete.

Cocaine for Burns, Blisters, etc.

Dr. Landon B. Edwards wished to emphasize the special value of cocaine in the treatment of *burns*. Recently he was called to a lady who had turned over a kettle of boiling water on one of her ankles and foot. When he arrived, the blisters that were unbroken apparently contained as much as three gills or more of serum, and the lady was suffering intensely. A number of the blisters were broken in removing her stocking. She was wearing very low cut house-slippers at the time of the accident. She wanted something “to take the fire out.” He had with him two drachms of a four per cent. solution of cocaine muriate [gr. v to ʒij of water], which he applied with a camel’s hair pencil to the raw surfaces, and around the margins of the raised blisters. In twenty or thirty minutes she was easy. He then prescribed:

R. Muriate of cocaine.....ʒiv
Distilled water.....ʒiv

M. S: Apply enough to wet the raw surfaces when painful.

The pain was kept constantly relieved by these applications, made at varying intervals of from two to six hours. The next morning the lady put on her stocking—which broke other blisters—and poured the solution on it over the injured parts. Thus, against advice, however, she went about her

house attending to household duties, and said she didn't need the doctor. In a few days she was thoroughly well, with some slight cicatrices. He spoke also of a cook who severely burned her arm, which he treated in pretty much the same manner, and with like good. He further mentioned the case of a book-keeper who by boat rowing severely blistered his hands. The raw surfaces in the palms, due to the breaking of the blisters, were so painful as to prevent the use of pen or handling his books. By keeping the sores painted with a three per cent. solution of cocaine, he was able to attend to his duties without pain. In many like injuries cocaine is extremely serviceable, and we should keep it at the head of our lists of "ready-relievers," in cases of cuts, abrasions, etc.

Cocaine in Laryngismus. (?)

Dr. M. L. James reported the case of a lady who had a very acute attack of laryngeal spasmodic trouble, very much resembling whooping cough in the character of spasms. He painted the larynx morning and night with a two per cent. solution of cocaine, which relieved the spasms. She has "spells" only when she is passing from under the effects of the cocaine.

Under head of REPORTS OF CASES, Dr. C. W. P. Brock stated that recently a negro bit the finger of a gentleman—apparently not severely, and without breaking or apparent injury to the joint. Ten days later the finger sloughed off.

Peeling of Skin and Like Effects of Quinine, etc.

Dr. R. B. Stover exhibited scales of epidermis that came off the skin of a child, aged 12 years, as the result of the use of quinine in malarial fever. Some of the scales were as large as two inches or more square. There was nothing like scarlet fever. During the first day and night of treatment the severity of the symptoms required fifteen grains or so of the sulphate of quinine.

Dr. Hunter McGuire remarked that he had several times seen quinine act just in the way described. He has seen it, also, produce other skin troubles, such as eczema, urticaria, etc. He has a patient in whom quinia sulphate—powder, pill, or solution—always produces a distressing urticaria; but if he combines calomel with the quinine, it acts kindly. He has seen even a teaspoonful of the tincture of cinchona produce dermatitis. In such cases of idiosyncrasy as to the evil skin effects of quinine, salicin is generally a reliable substitute.

He would incidentally remark that *salicin is almost a specific in chronic diarrhæa.*

Dr. R. A. Lewis has seen the *tongue swell* to enormous proportions—even within fifteen to twenty minutes—after taking ordinary doses of quinine. He agreed with Dr. McGuire, that salicin is a good substitute when quinine acts badly.

Dr. Stover presented for examination the colored woman spoken of by Dr. Jacob Michaux, who, although feeling well and looking well, always exhibited an *abnormally high temperature.* Several of the doctors present who had tested thermometers, tried her temperature under the tongue in the usual manner, and in each instance they registered from $99\frac{3}{4}^{\circ}$ to 99.9° . She has been so for years, and has not been sick that she knows of. The pulse has usually been about 100 per minute, though under the excitement of being examined now by so many doctors, it numbered from 108 to 110.

By a unanimous vote of the Society, the Board of Visitors of the University of Virginia were requested to *elect Dr. Wm. C. Dabney, of Charlottesville, Va., Professor of Practice, Obstetrics, etc.,* at their coming session, August 4th. This was done without request, suggestion or knowledge of Dr. Dabney, but simply as a voluntary expression of estimate of his special ability to fill this chair.

Heredity is the subject for the next regular meeting, June 27th, and Dr. M. A. Rust is the appointed leader. [We have not the space in which to report this session, other than the paper by Dr. Rust, under the head of "Original Contributions."]

Peacock's Bromides.

Fred. B. Wood, M. D., 456 Broadway, Milwaukee, Wis., says: "I have given Peacock's Bromides a *thorough test*, and am pleased to state that after an experience of twenty-five years I have never found any remedy which acts so surely as this preparation does. I am sure that in the near future, especially in the treatment of the brain and nerves, it is destined to take the place of the older preparations to the benefit of both physician and patient."

Analyses, Selections, etc.

Bichloride of Mercury for Consumption.

We have for some time been using corrosive sublimate with such marked advantage in the treatment of tuberculosis of the lungs in a manner so much like that spoken of in the subjoined extract from July number, 1886, of *Progress*, that we had intended before this to make note of the fact. *Progress* does not tell us to whom to credit the following striking illustration of its value in tuberculosis: "S. T. M., aged 38 years, came October 23, 1885, in a very feeble and emaciated condition, suffering from severe dyspnœa, hoarseness, frequent chills followed by high fever, and colliquative sweats. Examination showed extensive infiltration of the epiglottis and the walls of the larynx. The vocal cords were concealed behind the swollen tissues above. The cough and expectoration seldom ceased more than five minutes at a time during the entire day. The sputum was so rich in tubercle bacilli, that mounted preparations of it were used as samples for illustration in teaching. This man got a spray of the bichloride of mercury, prepared as follows:

R̄. Hydr. bi-chloridi.....gr. ij
 Aquæ destillatæ.....℥. j
 Sodii chloridi.....ʒj

M. Ft. solutio.

He was ordered pills of the bichloride gr. $\frac{1}{10}$ each, one before each meal and at night, and a pill composed of assa-foetida gr. iij, and ext. nux vomica gr. $\frac{1}{4}$, to be taken at the same time. In six weeks he was walking the fields five or six miles daily, hunting game. He was married last January, and is now out West."

New Operation for Fistula in Ano.

Dr. Joseph M. Mathews, of Louisville, Ky., describes (*Progress*, July, 1886) his method of treating fistula in ano: Insert the ordinary exploring probe into the external orifice of the fistula, to determine, if possible, that only one sinus exists. The majority of fistulæ are of this kind. Being satisfied of this fact, I then take a long, slender laminaria tent, and push it gently into the fistulous sinus to the fullest extent that it will go. Allow this to remain for several hours, at the end of which time it is withdrawn. This procedure causes but little, if any pain. The laminaria tent is

preferable to sponge, for the reason that it furnishes its own moisture, which assists in its withdrawal. After this dilatation, take Otis's improved urethrotome, with small point; closing the instrument tightly, push it gently as far into the sinus as it will go, and then by the aid of the screw-attachment, dilate the sinus. When this is done, the turning of the screw at the end of the instrument will cause the concealed knife to protrude at the distal end, according to what measurement you desire. The instrument is then carefully withdrawn, cutting through the *wall* of the sinus throughout its whole length. The cut, as will be perceived, has been made subcutaneously, and the pain is insignificant. What hæmorrhage takes place is easily controlled by pressure. In several cases I have turned the instrument and re-inserted and practiced the same procedure upon the opposite side at one sitting. If this is not thought advisable, the patient is allowed to go several days before repeating the operation, which is to include the other side.

The advantages which I claim for the operation are—(1), Over the injection plan, it must take precedence, for the reason that the injection of any agent that is commonly used for such purpose, especially in old-standing cases, does not accomplish what is desired. The sinus is lined by a thick pyogenic membrane, which will, in the majority of cases, resist the action of said agents; hence, it is impossible to get healthy granulations. (2), With this instrument, both the top and the bottom, on each side (if necessary), can be *cut through*, thereby insuring a good granulating surface, and this, too, without pain. (3), Over the ligature, either elastic or non-elastic, it possesses the advantage of cutting through both top and the bottom, on each side of this thick membrane, while the ligature cannot possibly go through any but the top of the sinus, as it cuts its way out, leaving, of course, the callous bottom, which in many cases would refuse to heal, it being a positive rule in the operation for fistula, established by Mr. Salmon, that the *bottom* of all these tracts must be divided to insure a cure. Again, in using the ligature, the sphincter muscle or muscles must of necessity be divided if the internal opening be above them. In the operation with this instrument, the muscle is never divided or interfered with. (4), Over the knife, this operation dissipates all horror in patients that dread the knife; excessive hæmorrhage is avoided; the sphincters are not cut, and the patient is not confined to bed or taken from business. In the majority of cases treated by this method, I have done

so without their knowing that anything in the shape of an operation had been done. Exhibiting the instrument to them, the knife being concealed in its case, patients have never known other than that it was a probe.

If I find, after a lapse of a few days, that a sufficient depth was not reached, the instrument is again inserted, and the same procedure practiced. The patient is kept under observation a sufficient length of time to be assured of a perfect cure.

Where pus cavities are found, or many sinuses exist, of course this operation is not advised. But in the selected cases mentioned, I am sure that the advantages claimed for it will be realized. A score of cases in my practice attest its value.

Iodide of Potassium in Spasmodic Asthma.

J. A. Ormerod, M. D., F. R. C. P., Assistant Physician to the City of London Hospital for Diseases of the Chest, etc., contributes his experience with this drug in thirty-six cases. (See *The Practitioner*, April, 1886.) All of his cases displayed, with varying severity, the cardinal symptoms of the disease, namely, difficulty of breathing coming on suddenly, usually in the early morning during sleep, passing off after a time so as to leave the patient comparatively well, but recurring usually in a usual fashion, and at regular intervals. The fact that the disease exists as a symptomatic entity seems to be undoubted.

The iodide was given alone, or if in combination only after the effect of the uncombined drug had been watched. It proved a failure in nine out of thirty-six cases. Its good effects (with a limitation to be mentioned presently) were not limited to the uncomplicated cases. The cases where the asthma appeared to be distinctly secondary to chronic lung disease are too few to say much about; but in some of them at least it did good. The symptoms most amenable to the drug were the nocturnal attacks of dyspnoea—its effect was often remarkable. Thus, in many cases, they disappeared altogether; in others they were much reduced in frequency and severity; but a troublesome cough, or a certain shortness of breath on rising in the morning, often persisted. That the nocturnal attacks were really controlled by the iodide was shown by the fact that they recurred (in many cases) whenever the drug was stopped. It has therefore the effect of relieving rather than curing. Five or ten grains three times a day suited best in most cases; in some

a larger or smaller dose did better; but the effect seemed to wear off. The *condition of the nasal mucous membrane* contributes, it is said, to the production of asthmatic attacks; and iodine might therefore be thought to act by producing coryza; but coryza occurred in very few of the patients thus treated. In one case the attacks had been preceded by coryza, and they were nevertheless stopped by the iodide. *Syphilitic taint* has never been alleged as the cause of asthma. In one case I substituted mercury for the iodide, and a relapse immediately followed. The gouty diathesis is an undoubted cause of asthma, and iodide of potassium is useful in gout. But the promptitude of its effect on the spasmodic attacks of asthma, and the promptitude of the relapse when it is stopped, makes it unlikely that it acts by modifying the general condition of the patient. Its action may be fairly compared to that of bromide in epilepsy. The chemical similarity of the drugs is obvious. There are similarities also between the two diseases. Both are characterized by attacks which recur periodically and often with considerable regularity, and which leave intervals of tolerable health. Epilepsy often begins in the night, as asthma does still more frequently. Asthmatic attacks may be preceded by a kind of warning. Both diseases are probably due to some fault in the central nervous system, though in both, extrinsic causes may determine an attack. The two remedies act promptly in either disease, and act best upon the capital symptom; thus the typical epileptic attacks are more amenable to bromide than are the *petit-mal* and other aberrant manifestations of epilepsy; while iodide controls the sudden and severe nocturnal dyspnœa rather than the cough and slight shortness of breath which many asthmatics experience on waking in the morning. Neither drug is curative, at least in confirmed cases; though relapses on discontinuation of treatment are more speedy, I imagine, in epilepsy than in asthma. In both diseases a certain proportion of cases are not benefitted, though the proportion of asthmatics unaffected by iodide is probably larger than that of epileptics unaffected by bromide; and iodine as a remedy in asthma has certainly more numerous and successful rivals than has bromine in epilepsy.

Etiology and Treatment of Chorea.

Frank R. Fry, A. M., M. D., Attending Physician St. Louis Medical College Dispensary, Department of Nervous Diseases, St. Louis, Mo., presented a short review of some

of the current literature on this subject, during the session of the Mississippi Valley Medical Association, held at Quincy, Ill., July 14th, which will be found interesting and instructive.

Chorea has received much attention during the last two or three years, with a tendency to remodel opinion and theory in the light of recent scientific research. There exists at present a variety of theories in regard to its etiology. The most attractive is the rheumatism theory, with adherents in England, France, and America. They may be arranged in three classes: First. Those who believe that rheumatism, from the fact that it is frequently followed by anæmia and debility, may become thus the predisposing cause of chorea. Secondly. Those who believe that there is a more intimate, but undiscovered, relation between the two affections. The following quotation is a fair statement of their position: "That some causal relationship exists between rheumatism and chorea has been known since the beginning of the century, but the true nature of this relationship has not been accurately ascertained." (Dr. James Ross, new work on *Diseases of the Nervous System*.) Thirdly. Those adopting the embolism theory. The original position of this class is thus stated in a quotation from Dr. James Frederick Goodheart (*Diseases of Children*): "The constancy of these little growths upon the margins of the valves of the heart has led to a very direct, simple and fascinating pathology for chorea, in the suggestion that it is due to embolism. The vegetations are, it is supposed, washed off the valves, carried into the smaller branches of the cerebral arteries, and thus produce local anæmia, malnutrition, and degeneration of the cerebral cortex and ganglia, which leads to loss of control over the muscles."

Against the rheumatism theory, as a whole, many arguments have been used, some of them as follows: In many cases of chorea, there are no evidences of acquired or inherited rheumatism. The choreic movements almost always precede the affections of the joints and heart, seeming to be the cause, not the result, of the rheumatism. In localities where there is much rheumatism we would expect to find more chorea; such has not been proved to be the case. Chorea occurs most frequently among children; rheumatism among adults. Chorea occurs much more frequently among girls; rheumatism does not. If there is a difference, it is in favor of males.

Most of these facts have been familiar to us a long time,

but they have assumed new interest in the light of the embolism phase of the subject, which is just now receiving much attention on account of the recent experiments of Dr. Angel Money. Dr. Money, by introducing into the vessels of certain animals minute particles of matter, succeeded in producing embolisms in the brains and spinal cords of these animals, followed, in some instances, by "involuntary movements indistinguishable from those of chorea." The scope of this paper does not permit a rehearsal of the discussion of the Money experiments, but only to mention what seems to be the most important question that the discussion has brought out—namely, as to whether the movements thus produced by Dr. Money are analogous or similar, physiologically, to those of chorea in the human subject. This question involves difficult anatomical and physiological problems that must be solved before we can solve the problem of chorea. Goodheart says of the embolism theory: "It can hardly be doubted that acute endocarditis, from whatever cause arising, leads, not infrequently, to capillary embolism, though, it would appear, not to chorea." Speaking of the same subject, Dickinson says: "It is a familiar observation that, though the chorea of mental origin continually becomes associated with cardiac murmur, yet the chorea precedes any alteration in the rythm and sounds of the heart, as if the cardiac affection were the result—not the cause of the choreic disorder." (*Lond. Lancet*, Jan. 2, 1886.)

With this short review, the rheumatism, and its appendage, the embolism theory, must be passed by, to notice others. The fact that chorea has been associated with so many different pathological conditions and diseases has led one class of observers to speak of it only as a symptom. They do not consider that it is entitled to a nosological entity, as a disease *sui generis*, but that it is a phenomenon that may appear in the wake of various pathological conditions. Opposed to these are others who consider it to be a disease *per se*. They so regard it from the fact that in most cases there are a certain constant assemblage and sequence of symptoms. They are urged to this view by the following facts: There is almost constantly the presence of psychical symptoms; the movements frequently have their origin in mental emotions, especially fright, and are exaggerated by excitement; that families are more prone to the disease in which there are insanity, epilepsy, and other evidences of a neuropathic predisposition; that only the voluntary muscles are affected, and that there is a cessation of the movements

during sleep. These facts, and the absence of satisfactory pathological data, make them willing to place it, for the time being at least, among the neuroses, accounting for its incipency in some undefined—probably functional—disturbance of the nerve centres—the anæmia, heart and joint affections being complications of the original trouble.

One other theory deserves notice. It is embodied in a paper read by Dr. C. R. Stratton before the Annual Meeting of the British Medical Association last year. The substance of it, briefly stated, is as follows: According to the writer's experience, all cases of chorea may be placed in two groups. To the first belong those cases occurring in childhood, with the following train of symptoms: General lowered vitality, sores on the margins of the nose and lips, often accompanied with fissure, malaise, left apex-systolic murmur, blunted intellect, poor memory, vague pains and swellings of the joints, and then the choreic movements. In fatal cases, we find in the cord and brain a pretty general hyperæmia, and minute capillary infarctions, and exudations on the edges of the mitral valve. The cases of the second group do not run this specific course. It includes cases due to injury of the brain substance, from wounds, cerebral hæmorrhage, etc., and those occurring in the wake of epilepsy, or in organic diseases of the brain and cord. They do not occur at any special period of life, and their course is uncertain. He says: "It is the pre choreic stage of this first group I would notice. And I would ask, What has taken place before the insanity of the muscles comes on? and is chorea not merely an occasional sequel of some more frequent specific disease?" He suggests that it may be a communicable disease followed by chorea, as diphtheria is followed sometimes by paralysis. He says that the sores in the nose and mouth yield a micro-organism that stains in a peculiar manner; possibly it is peculiar to the disease. He also hints that possibly the heart lesion is a characteristic one. He says that the vegetations undergo a coagulative necrosis, developing colonies of micrococci. These, he believes, are carried away in the blood current, forming embolic infarctions in the nerve centres and in the parts about the joints. He reminds his hearers that often they are called on to treat various non-descript ailments which are alluded to as "general debility," "anæmia with high temperature," "simple endocarditis," or "scarlet fever without rash"; and he suggests the possibility that many of these may, on more careful study, be found really to be examples of this supposable malady, in

which there has been no occurrence of the movements. This is a sort of a new interpretation of the embolism theory—ingenious and fascinating, but not yet proven.

Such, with other variations, is the variety of opinion in regard to the etiology of chorea. This tells its own story—the cause of chorea is not yet known. Our data and knowledge are abundant, but still chaotic. There are opportunities and a necessity for us to work, with many probabilities of success in discovering new facts. To this end we should seek diligently in every case for an exciting cause; and in so doing we should have prominently in our mind the intimate association that exists between the periphery and the central nervous system.

It is needless to recite what have been assigned as exciting causes of chorea. We are familiar with many. Yet, no doubt every physician of any considerable experience has seen cases where he has discovered a cause unknown to him before, on the removal of which the chorea disappeared. On the other hand, we fail to relieve some cases, because we cannot, or do not, discover the exciting cause. In every case there should be made a searching examination of our patients' eyes, nose, mouth, and ears, all the organs of the cranial, thoracic, abdominal and pelvic cavities, and of other organs, including the skin; and whenever we find anything to treat, we should treat it well. In the light of recent research, it would seem especially worth while to notice the following points: The heart affection, the character of the murmur, the time of its coming and going; the articular troubles, not simply calling them rheumatism, and passing them by; the condition of the skin, every eruption that may occur; to look out for paresis, remarking the manner of its coming and going; to examine the buccal, nasal and pharyngeal mucous membrane, and to note how frequently sores appear on the margins of the lips and nose.

Dr. A. Jacobi, of New York, speaks of the frequency of chorea affecting the muscles of the face, sometimes the upper extremities, or even becoming general, from pathological conditions of the naso-pharyngeal regions—as congestion of the mucous membrane, large tonsils, etc. He says (*Amer. Jour. Med. Sci.*, April, 1886): "Unless their cause be recognized, I have seen these lasting through quarters and halves, or even whole years, getting somewhat better occasionally, particularly in warm, good weather, but liable to return at any moment. The majority of patients of this class are children." Dr. Fry has seen such a case within the last

three weeks at the St. Louis Medical College Dispensary, and referred it to another department for treatment of the catarrhal trouble. Two years ago he saw a well-developed, healthy-appearing young woman, 19 years of age, who had long had a continuous and annoying hemichorea. After treating her on general principles for a month or more, he found that there was an undue sensitiveness about the ovaries. He then gave a prescription of bromide potassium and ergot, and applied galvanism, with the negative pole on the abdomen over the ovaries, and the positive along the spine. The chorea very soon disappeared, for the first time in nine years.

At a recent clinical lecture, Prof. Da Costa presented a patient in whom a violent chorea had very soon disappeared almost entirely with the administration of hyoscyamine (dose $\frac{1}{210}$ to $\frac{1}{100}$ gr.). He thus states his reasons for using it: "It is claimed that *hyoscyamine* is a valuable anti-spasmodic, and exercises a remarkable control over the muscular movements. Also, with the control of the movements, the condition of the muscles is improved." All of us could cite instances where a rational selection of remedies has given fortunate results; but we are not as constantly careful as we should be. When a patient is presented having choreic movements, we are too prone to simply call it chorea, and commence giving arsenic. In this method of treatment we often have good results, for in *arsenic* we have stumbled across a medicine that fills many of the requirements in treating the general run of cases. It is the best single remedy that we possess for this affection, yet on this account the most liable to abuse. We may easily be disappointed if we do not use it with due care. In each case we should carefully watch the tolerance of the patient; else we will not be able to increase the dose in the proper manner to get the desired effect. If we are not careful to have the bowels constantly regulated, we will soon have to contend with a gastric congestion. We should not allow constipation to exist for a single day, when we are giving large doses of arsenic. In most cases its effect is better when given with iron, and he believes the tolerance is thus increased. Yet, even when we have used all possible precautions, we will find that in certain cases it is not tolerated, or that we get no beneficial effects, and that we will have to seek other remedies.

Dr. W. B. Cheadle (*Lond. Prac.*, Feb., 1886) says, in speaking of the use of arsenic in chorea: "I would not have it supposed that I regard the whole treatment to consist in

pouring so many doses of liquor arsenicalis down the patient's throat. There are many other essential measures to be adopted in the successful management of chorea—many other drugs besides arsenic which beneficially influence it."

Artificial Alimentations—Epidermic, Rectal and Vaginal.

In a paper with this title by Dr. I. N. Love, of St. Louis, read before the Mississippi Valley Medical Society, July 13th, 1886 (*W'kly Med. Rev.*, July 17th), the author's original suggestion relates to the *vaginal* method of administration of medicines, nourishment, etc.

He begins with the statement that numerous conditions which interfere with deglutition—as diphtheria, cut and inflamed throat, severe stomatitis, tetanus, post-pharyngeal abscess, etc.; and gastric and abdominal affections, as cancer, ulcer, or catarrh of stomach, as well as many acute diseases and continued fevers—present necessities for artificial feeding and medication. The best form of nutriment—the older way, still somewhat in vogue—is fluid foods and stimulants, in the same form they are taken by the mouth. Beef-tea, milk and brandy, and gruels, have been used in this way. Most writers recommend liquid food without special preparation. Roberts, in 1880, recommended the addition of liquor pancreaticus to nutrient enemata just before administration; later (1882), (Quain's *Dict. Med.*) he repeats the recommendation. Since 1831, Dr. Love has invariably peptonized food to the fullest degree before using. Fairchild Brothers & Foster furnish digestive ferments that are reliable. Their pancreatic extract, with carbonate of soda ("peptogenic tubes"), is very convenient. For nutritive purposes, Dr. Love has generally found peptonized milk convenient and sufficient; but, under some circumstances, he gives other forms of peptonized foods, and in some cases defibrinated blood. He has obtained very encouraging results in the way of nutrition by "supplemental alimentation."

We may employ three plans to secure entrance of nourishment into the circulation and tissues:

1st. *By the skin*, in numerous cases, he has nourished patients markedly for a long time. Bathe as large a surface of the body as possible with nutritient emulsions—usually pancreatic emulsions of cod-liver oil and thoroughly peptonized milk, adding perfume to improve the odor. Applications should be made by gentle friction; the frequency and prolongation should depend upon the patient's condition. The skin should be previously washed, and massage should

not be so prolonged as to fatigue. This plan is peculiarly adapted to children where digestion is impaired by constitutional or prolonged disease. The good effects largely depend upon the thorough manner of manipulation.

2d. *Rectal Feeding*.—Until the perfection of artificial digestion, the success by this plan was not marked. "M. Catillon fed two dogs for two months by rectal injections of eggs only. One which received eggs only, lived with difficulty, and lost weight; the other, which had eggs, glycerine and pepsin, kept well and held his weight; but when the pepsin was omitted, he too lost weight, and his temperature fell." (Mickle. *Pract'n.*) The rectum and colon possess but little digestive power; hence the necessity of previous digestion of food before giving enemata. Brown-Séquard, Czerney, Dutschenbergen, Leube and Heminger gave favorable reports on the mingling of food with digestive materials.

In administering food or medicine by the rectum, see that it is thoroughly emptied of all fecal matter, and cleansed with warm water containing a small portion of baking soda or borax. The enema should be at a temperature the same, or little above, that of the patient. The nozzle of the syringe should be warmed, and very gently and slowly introduced. Dr. Love does not usually introduce more than a half-pint of peptonized fluid at one time, and lets it percolate into the bowel very slowly, always using a fountain syringe, and elevating the bag containing the fluid just high enough to furnish force sufficient to carry the fluid into the bowel so slowly as to little more than to keep pace with absorption. The nozzle should be removed as gently and gradually as its introduction, and the nates firmly pressed together for five minutes, with a napkin, thus materially guarding against irritation, tenesmus, and tormina. Trust very little to the nurse, until we have demonstrated fully the preparation of the peptone and its proper introduction into the bowel.

Dr. Duncan J. Makenzie (*Brit. Med. Jour.*, June 19, 1886) suggests an ingenious plan by which a tin vessel, filled with fluid in process of digestion, and kept at moderate heat, is gradually allowed to empty itself into the bowel through rubber tubing, connected with a celluloid catheter, introduced into the bowel about two inches. At no time is the bowel overloaded. The principal advantage consists in the convenience and time saved by transmitting the peptone into the bowel directly from the vessels in which it is prepared. The Tin vessels, with stop-cocks and rubber tubing (such as are in the shops for douche purposes), answer nicely. Previous

to introducing the catheter into the rectum, Dr. M. passes the catheter through the centre of soft rubber perforated so as to grasp it firmly, and large enough to fit snugly over the anus. At each corner tapes are attached; two are tied behind and two in front to a band around the loins. The rubber is pressed closely up to the anus, and the tapes are tied as tightly as convenient.

But many times we must desist temporarily or entirely from rectal alimentation on account of rectal irritation. Under such circumstances, if the conditions will permit, Dr. Love suggests a plan from which the results have been very satisfactory in a number of cases. So far as he is aware, the plan is original with him. It is that of

3d. *Vaginal Alimentation*.—Where conditions will allow, the necessity of properly nourishing our patient being urgent, we may use the vaginal cavity alone as a means of introducing peptones and medicines, or in conjunction with other channels. Of course the extent of absorbing surface is not as great as the bowel; but is sufficient to aid nutrition, and we can absolutely depend upon it for the administration of medicines in order to obtain constitutional effects. He usually uses suppositories, or when a more rapid effect is desired, solutions with warm water—one or two tablespoonfuls. For food, the liquid peptones should be given as carefully as by the rectum, in a smaller quantity, but oftener. Semi-solid masses—such as thoroughly minced and macerated raw beef, with minced sweet breads, can be given very conveniently by using vaginal capsules in sizes to suit the case. After introducing the food or medicament, he usually places over the vaginal opening a small mass of absorbent cotton covered with oil silk, and held in position by a T bandage. The apparatus for rectal feeding suggested by Makenzie might be well applied in a similar way to vaginal feeding.

In January, 1884, Mrs. M., aged about 70, came under Dr. Love's care, with typho-malarial fever and gastro-intestinal catarrh of such a severe type as absolutely to preclude all nourishment or medication by the stomach or bowels, except at rare intervals. The case urgently demanded free quantities of quinine; the stomach being resentful of all intrusion, the rectum was brought into requisition; but the effort was a failure—great irritation resulting, which could not be controlled, even though the enema included laudanum in free amount. It suddenly occurred to him to utilize the vagina, and he at once acted upon the idea with very

satisfactory result, being enabled to saturate the lady with quinine (thorough cinchonization secured at pleasure), and other remedies as required. He at once realized that here was a channel by which he could also nourish his patient. For six weeks Mrs. M. was almost entirely medicated, stimulated and nourished through the vagina, the surfaces of her skin being utilized to some degree. At proper intervals the cavity was cleansed with borated solutions, but at no time were the absorbents of the membrane idle, and at no time did the vagina resent or resist the intrusion. The patient did not recover, but her life was prolonged and her comfort subserved by the means related. Had she been younger, the result might have been different.

He has used this means of nourishing and medicating patients in probably a dozen instances since his first experience, and feels safe in arriving at the following conclusions:

1. Where the conditions will permit, the vagina may be utilized to supplement feeding by rectum.

2. In some instances, diseases of the alimentary canal in its entirety precludes feeding by either the stomach, or the rectum; in such cases the vagina may be utilized to practical advantage.

3. Whether the vagina or rectum be used for feeding, the materials should be thoroughly digested previous to using—the milk albumen or beef fibre completely peptonized, and the starchy matters changed into dextrose or glucose.

4. In many instances, the vagina may be utilized for purposes of general medication and stimulation, and the stomach saved for the important one of feeding.

5. In many cases, vaginal feeding, stimulation and medication is beneficial; in many others it is a potent means of saving and prolonging life.

6. In both rectal and vaginal feeding, the same gentle care is necessary. One advantage possessed by the latter over the former is that the vagina is much more tolerant of intrusion, and can be utilized for an almost unlimited time without revolting.

“My dear,” said a frightened husband in the middle of the night, shaking his wife, “where did you put that bottle of strychnine?” “On the shelf next to the peppermint.” “Oh, Lord!” he groaned, “I’ve swallowed it.” “Well, for goodness sake,” whispered his wife, “keep quiet, or you’ll wake the baby.”—*N. Y. Sun.*

Book Notices.

International Encyclopedia of Surgery. Edited by JOHN ASH-HURST, JR., M. D., Professor of Clinical Surgery in the University of Pennsylvania, etc. Vol. VI. New York: William Wood & Co. Royal 8vo. Pp. 1170. (For sale by West, Johnston & Co., Richmond).

The sixth, last and index volume of this great work is before us. We hail it gladly, as it is the capstone of one of the greatest monuments to American publishing and editorial enterprise that has ever been completed. Few progressive writers, teachers or practitioners of surgery can afford to be without the help of this book.

The standard of the sixth volume is in no respect below that of the other five. In paper, print, text, illustrations, and general get up, it is what we would expect from the well known house of Wm. Wood & Co., under the authorship of the pains-taking editorship of Dr. John Ashhurst, Jr. As a guarantee of the thoroughness and authenticity of the first four chapters, it is only necessary to state that they are written respectively by I. Solis-Cohen, John Ashhurst, Jr., William Allingham, and E. L. Keyes. In each of the fields assigned to these writers, they have been pioneer workers, and have made national reputations. In injuries and diseases of the œsophagus, there is no better recognized authority than Dr. Cohen, and we have no doubt this last effort of his will long maintain its prominent place. Few familiar with the literature of the subject of intestinal obstruction can have failed to associate Dr. Ashhurst with its progress. Few recent writers have failed to give him due prominence by quotations. Diseases of the rectum suggest no less promptly the name of William Allingham, of England. Few recent writers have become better known in the field of genito-urinary diseases than Dr. E. L. Keyes, and his contribution to this work on urinary calculus is, as far as we know, the best treatise on the subject. This chapter is marked by a careful historic sketch of the subject dealt with, and much valuable original work, and beautiful illustrations. And equally as much may be said of the correlated chapters on Lithotrity, by Wm. H. Kingston, of Montreal, and Reginald Harrison, of Liverpool. Especially this last chapter will be read with interest.

Injuries and Diseases of the Urethra and Injuries and Diseases of the Male Genital Organs are from the pens of Simon

Duplay, of Paris, and H. Royes Bell, of London. *Injuries and Diseases of the Female Genitals* is by Dr. Theophilus Parvin. By beautiful and exact illustrations, and by drawing from experience and history a vast fund of information, the writer has produced an article worthy in every respect to grace the position accorded it.

The chapter on Cæsarian Section and its substitutes, Gastro-Hysterotomy or Laparo-Hysterotomy, and Laparotomy for Ruptured Uterus, is by Dr. Robert P. Harris, of Philadelphia. This is one of the shortest chapters, but its conciseness makes it none the less readable and valuable. Dr. Carroll Lee gives a good resumé of the subject of Ovarian and Uterine Tumors; but, as might be expected, in view of the great interest of the subjects treated of under the above head, we regret that he is not fuller upon some points. For example, on page 805, he says that the only treatment for dermoid cysts is laparotomy, but does not explain whether the laparotomist is to attempt to remove the cyst, or only drain it of its contents by a drainage tube.

Inflammatory Affections of the Bowels is treated of by Dr. L. Ollier, of Lyons; and that part in which he treats neuralgic and rheumatic inflammation of bone is especially interesting. Chapters of Scrofulo-Tuberculosis and the Structural Diseases of Bones, Tumors of Bone, and on Orthopedic Surgery, and the Treatment of Deformities, are from the pens of Eugene Vincent, A. Poucet, and Frederick R. Fisher. Each of the writers have done justice to themselves, their themes, publishers, and editor.

As an Appendix, there are chapters by Edward Cowles, Bennett A. Clements, and Geo. Jackson Fisher, on the Construction and Organization of Hospitals; Preparation of Military Surgeons for Field Duties—Apparatus Required—Ambulances—Duties in the Field; and A History of Surgery. The scope of this great work does not admit of a critical review, but from the outline we have given, its value must be apparent. T.

Diseases of the Stomach and Intestines. By PROF. DUJARDIN BEAUMETZ, Physician to the Cochin Hospital, etc. Translated from Fourth French Edition by E. P. HURD, M. D., one of the Physicians to Anna Jaques Hospital, at Newburyport, Mass., etc. With Illustrations and one Chromo-Lithograph. New York: Wm. Wood & Co. 1886. Cloth. 8vo. Pp. 389. (From Publishers).

The publishers deserve much praise for their very practical selections of works for their "Library of Standard Med-

ical Authors," of which this is the May number, 1886. The book is really a translation of that part of Vol. I of the great French author's *Leçons de Clinique Therapeutique*, which relates to the treatment of diseases of the stomach and bowels. The translation is well made. There is a peculiar practicability characterizing the publications of Dujardin-Beaumetz which makes them all of special importance to the practitioner. This is really a manual of clinical therapeutics for the student and practitioner, adapted to the treatment of diseases of the stomach and bowels. One who writes so tersely and dogmatically, however, will now and then show a hobby, or lay stress on a whim. Our author is "down" on corsets, and the disuse by men of suspenders—attributing frequent dyspepsias to these things. An excellent index greatly improves the value of this book.

Practical Notes on the Treatment of Skin Diseases. By GEO. H. ROHÉ, M. D., Professor of Dermatology in College of Physicians and Surgeons, Baltimore, etc. Baltimore: Press of Thomas & Evans. 1885. Paper. 12mo. Pp. 62. Price, 25 cents. (From Author.)

This little book possesses the great advantage of using terms that are familiar to the general practitioner, and thus is far greater help than many systematic works that use and make technicalities that convey no idea to the ordinary run of physicians. There are many formulæ detailed in this monograph on "diseases of the perspiratory and sebaceous glands," and when and how to prescribe for them is described. This little book is a very useful compendium on the treatment of the class of diseases with which it deals.

Insanity and its Treatment. By G. FIELDING BLANDFORD, M. D., Oxon., F. R. C. P., London, late Lecturer on Psychological Medicine at School of St. George's Hospital, London. Third Edition. Together with "Types of Insanity," by ALLAN McLANE HAMILTON, one of the Consulting Physicians to the Insane Asylum of New York City, and the Hudson River State Hospital for the Insane, etc. New York: Wm. Wood & Co. 8vo. Pp. 379. (From Publishers.)

This volume contains two distinct treatises, as indicated by the title above. Dr. Blandford's part consists of twenty lectures on "the treatment, medical and legal, of insane patients," and is marked throughout with a practical familiarity with his subject. It is systematic in its arrangement, beginning with elementary facts and problems. Each successive chapter goes deeper and deeper into the subject, describing the various forms of insanity, and then winds up with valu-

able observations as to some drugs, and the treatment of the disease. Insanity is a subject that interests almost every general practitioner, and for this purpose, both as attendant upon the afflicted, and as medico-legal expert in court cases, Dr. Blandford's book will prove of great service. Dr. Hamilton's part is made up of about fifty pages of text, and nine of plates, illustrating as many different forms of insanity. We regard his chapters, IV and V, on "the examination of the patient," and "the commitment of the insane," as of special importance to general practitioners. The book is the February number, 1886, of "Wood's Library."

Medicine of the Future. By AUSTIN FLINT (Senior), M. D., LL. D.
New York: D. Appleton & Co. 1886. Cloth. 8vo. Pp. 37. Price \$1.
(For sale by West, Johnston & Co., Richmond.)

An excellent engraving of the beloved and lamented author, true to life, forms the frontispiece to this "Address prepared for the Annual meeting of the British Medical Association in 1886," which he was appointed to deliver. The prospective view taken in this address is hopeful. The vast amount of information being daily added to the treasury of medical knowledge will demand specialists in medicine. But no one should be a specialist who has not well grounded himself upon the routine of studies considered essential now-a-days for one to become a doctor of medicine. The language of the address is well selected, in good taste in every particular, and is striking in its force. It is a painful thought that the great Flint was not spared to deliver this address in person, which would have made it so much more effective.

Diagnosis and Treatment of Diseases of the Ear. By OWEN D. POMEROY, M. D., Surgeon to the Manhattan Eye and Ear Hospital; Ophthalmic and Aural Surgeon to New York Infant Asylum, etc. With 100 Illustrations. Second Edition. Revised with Additions. New York: D. Appleton & Co. 1886. 12mo. Pp. 413. Cloth. (For sale by West, Johnston & Co., Richmond.)

The second edition of Dr. Pomeroy's book on "Ear Diseases" has been somewhat enlarged by addition, covering the interval of three years since the first was issued. But strange to say, he does not mention *cocaine* as a remedy in neuralgic and inflammatory pains in the ear, although other aural surgeons—and among them the reviewer—has found it a very valuable agent in so-called earache. Such an omission must have been an oversight. It is well printed, of

convenient size, is a thorough exposition of the science of otology up to date, and more than holds its own in comparison with the recent English and American text-books on the same subject. We know of no better text-book on "Ear Diseases" in the language for students and practitioners, and the general excellence of the work is sufficient to induce any physician to add this book to his library. Want of space forbids any critical analysis of it, and in reality there is very little to take exception to, and much to praise. Some may differ with Dr. Pomeroy in his expressed opinion on some points; as, for example, as to the perfect safety of forcible syringing in ceruminous impaction; but such differences are the result of different experiences. We are glad to see that in this, as in the former edition, he has omitted the exhaustive survey of the anatomy and physiology of the ear, so common in recent text-books, as it more properly belongs to special works on anatomy. W.

Medical and Surgical Directory of the United States, 1886.

R. L. Polk & Co., Main Office, Tribune Building, Detroit, Mich. 8vo. Pp. 1452. Cloth. Price \$7. (From Publishers.)

This book, issued during the past month, contains a mass of information of very great interest to any one connected with the profession of medicine. It is invaluable to a majority of the profession, as well as to all manufacturing houses of drug supplies and surgical appliances. To every author of reprints it is of great value; to deans and secretaries of medical colleges; to springs companies, and proprietors of all sorts of health resorts, etc.; to proprietors of hospitals, institutions who have catalogues or circulars to distribute, or information to impart to the profession, etc., it is specially serviceable. To all such its value is almost incalculable, as shown by a running statement of the contents. The book contains a list of physicians and surgeons, arranged by States, with their respective schools of practice, postoffice addresses, date and college of graduation, population of localities, all existing and extinct medical colleges of the United States and Canada, medical officers of the army, navy and marine hospital service, medical societies, sanitariums, medical laws of each State, all medical journals, names of editors, prices, etc., descriptive sketch of each State and Territory, statistics relating to climate, rate of mortality, the best known mineral springs, etc., etc. To this is appended an alphabetical list of all the physicians in the United States, with a reference number opposite each name to the page of

the proper State register. It contains much more useful information, which our want of space will not allow us to refer to. In the advertising department, everything, it seems, that can be of service to the doctor is advertised. We repeat that this work is invaluable to every doctor, druggist, sanitarian, proprietor of health or pleasure resort, authors of papers, students, college officials, boards of health and examiners, etc.

Year Book of Treatment for 1885. By TWENTY-THREE ENGLISH CONTRIBUTORS. Philadelphia: Lea Brothers & Co. 1886. Cloth. 12mo. Pp. 311. (From Publishers.)

This little book is an exceedingly valuable one for the general practitioner of medicine, surgery, obstetrics, and gynæcology. It contains a resumé of the practical suggestions made in medical journals and books during the year 1885. But "'tis English, you know." A similar annual work by American authors of like celebrity as those who have edited this English "Year Book" would make a most excellent companion work for every doctor. The book before us is thoroughly indexed, making reference to subjects easy. Every doctor ought to have this book on his office table.

Dictionary of Practical Surgery by Various British Hospital Surgeons. Edited by CHRISTOPHER HEATH, F. R. C. S., Holme Professor Clinical Surgery in University College, London; Surgeon to University College Hospital, etc. Two Volumes Bound in One. Philadelphia: J. B. Lippincott & Co. 1886. Large 8vo. Pp. 970 and 884. Cloth. Price, \$7.50. (For sale by West, Johnston & Co., Richmond.)

The plan of this work is excellent, and well adapted to the wants of the general surgical practitioner, for whose use it was chiefly designed. It may be spoken of correctly as an authoritative, comprehensive treatise on practical surgery, arranged alphabetically as to titles, and quick reference to subjects being further facilitated by a remarkably good index. An improvement would be the introduction of wood cut illustrations; but these would have increased the price a good deal. It was a happy thought of the American publisher to combine the two English volumes in one book. "The subjects are treated of, as far as practicable, in the following order: 1, Cause; 2, Pathology; 3, Symptoms and Diagnosis; 4, Treatment; 5, Prognosis. Each writer has signed his article." We have racked our memory to find a

surgical subject not treated of in this book. While in a measure some of the articles may border on the synoptical too much, most of them are brief yet complete papers on the topics under consideration. The papers are marked throughout by a high degree of practicability, and as a whole the so-called "Dictionary" will be found to be quite a thorough treatise, useful upon the table of every general practitioner whose surroundings call on him for any surgery. We fully recommend it to our readers.

Treatise on Diseases of the Nervous System. By WILLIAM A. HAMMOND, M. D., Professor of Diseases of the Mind and Nervous System, New York Post-Graduate Medical School and Hospital, etc. With 112 Illustrations. Eighth Edition, with Corrections and Additions. New York: D. Appleton & Co. 1886. Cloth. 8vo. Pp. 945. Price \$5. (For sale by West, Johnston & Co., Richmond.)

This great work has become of as much importance in the library of every practitioner of medicine as the standard works on surgery are in the library of the surgeon; while to the specialist in nervous diseases, in any sense of the word, it is indispensable. Dr. Hammond having lately published a master-work on Insanity, the chapters relating to this subject in former editions have been taken out of the book now under notice, and the space thus gained has been utilized in the practical discussion of other subjects. The added section in this edition is on "Certain Obscure Diseases of the Nervous System," as follows: Tetany, Thomsen's Disease, and Miryachit and Kindred Affections. We feel that it is only needed to announce the issue of this revised edition in order to give an opportunity to all in need of a work on nervous diseases to get the best that is published.

Student's Manual of Venereal Diseases. By BERKELEY HILL, M. D., Professor of Clinical Surgery in University College, London, etc., and ARTHUR COOPER, M. D., Surgeon to Westminster General Dispensary, etc. Fourth Edition, Revised. Philadelphia: P. Blakiston, Son & Co. 1886. Cloth. 12mo. Pp. 132. Price \$1. (For sale by West, Johnston & Co., Richmond.)

This hand-book is pretty much an epitomé of the authors' larger treatise on *Syphilis and Local Contagious Disorders*, and serves all the practical purposes of the busy practitioner who seeks simply the diagnosis and treatment of venereal diseases. Sixty-seven formulæ are appended. For such a work as this, the table of contents serves sufficiently well the purposes of an index.

The Genuine Works of Hippocrates. Translated from the Greek, with a Preliminary Discourse and Annotations. By FRANCIS ADAMS, LL. D., Surgeon. Vols. I and II. New York; Wm. Wood & Co. (From Publishers.)

The title as above of these books gives a sufficiently definite idea of their nature. The "preliminary discourse and annotations" are of historic value, as well as explanatory of the text. Every student of medicine should take enough interest in the history of his subject to see what the great "Father of Medicine" wrote. This translation is excellent. Vol. I is the April number, and Vol. II is the July number of "Wood's Library." It is abominable not to let successive volumes of a work appear in consecutive issues of a series. The publishers are greatly at fault in this system—especially as they do not sell individual volumes of the annual series.

Diseases of the Spinal Cord. By BYROM BRAMWELL, M. D., F. R. C. P. (Edin.), Lecturer on Principles and Practice of Medicine, and on Medical Diagnosis in the Extra Academical School of Medicine, Edinburgh, etc. 53 Colored Plates and 102 Fine Wood Engravings. Second Edition. New York: Wm. Wood & Co. 1886. 8vo. Pp. 298. (From Publishers.)

Dr. Bramwell has made a new departure, as far as textbooks on nervous diseases are concerned, which aids the student very considerably in understanding the subject under consideration. We refer to the abundant number of wood and colored illustrations he introduces to explain the text. It is a standard work, and one that is serviceable to every practitioner. It is the January issue, 1886, of "Wood's Library of Standard American Authors," and cannot be bought except by subscription to the Annual Series. We wish the Publishers would arrange to sell individual works of this series—if even at slight advance in price for a single book.

Traite Elementaire d' Anatomie Medicale du Systeme Nerveux. By CH. FÉRÉ, Adjunct Physician at the Salpetriere, Chief of the Anatomic-Pathological Work at the Clinic for Diseases of the Nervous System, etc. Paris: A. Delahaye et Lecrosnier. 1886. Paper. 8vo. Pp. 493. Price 10 francs. (From Publishers.)

This "Elementary Treatise on the Medical Anatomy of Nervous System" is one of the latest publications from the office of *Le Progrès Medical*, and, at the same time, is almost

an essential work in the special study of diseases of the nervous system. It is well illustrated by a number (213) of original and borrowed wood-cuts; and a prime object of the author in his descriptions has been to present his subject topographically, in order that the book may be the more useful to practitioners. The first part of the work (covering over 300 pages) treats of the central nervous system, including the brain and spinal cord. The rest of the book embraces a study of the peripheral nerves. With the descriptions many practical suggestions are thrown out, explanatory of connection or relationship of symptoms to remote parts. It is an excellent book for student and physician.

Manual of Differential Medical Diagnosis. By GEORGE W. CUTLER, M. S., M. D., Physician to the New York Dispensary, etc. New York: G. P. Putnam's Sons. 1886. Flexible cover. 12mo. Pp. 161. Price \$1.25. (For sale by West, Johnston & Co., Richmond.)

This is a synoptical work—the distinguishing symptoms of the disease with which another is apt to be confounded being placed in columns. In short, it is tabular in form, like almost all the tables of differential diagnoses now printed. It is a ready helper to the hurried practitioner, and is another of those books that should always be convenient on the doctor's table. It is well indexed.

PAMPHLETS, REPRINTS, ETC., RECEIVED, for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

Hay Asthma in Negro, with Remarks on Etiology. DR. J. M. MACKENZIE, Baltimore. 12mo. Pp. 6. (From *Med. Rec.*, Oct. 16, 1884.)

Etiology of Simple Inflammatory Affections of the Upper Air Passages. SAME AUTHOR. 8vo. Pp. 16. (From *N. Y. Med. Jour.*, Sep. 12 and 19, 1885.)

Study of Congenital Syphilis. SAME AUTHOR. (From *N. Y. Med. Jour.*, May 31, 1884.)

Examination of Auditory Organs of School Children. DR. FRIEDRICH BEZOLD, Munich. 8vo. Pp. 52. (From *Arch. Otol.*, Nos. 2, 3, 4, 1885.)

A Year's Work in Laparotomy. DR. WM. GOODELL, Philadelphia. 12mo. Pp. 8. (From *Med. News*, Jan. 30, 1886.)

Recent Progress in Gynæcology and Obstetrics. DR. GEO. J. ENGELMANN, St. Louis. 12mo. Pp. 23. (From *Weekly Med. Rev.*, Feb. 21 and 28, 1885.)

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LANDON B. EDWARDS, M. D.....EDITOR AND PROPRIETOR.

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Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

The Doctor as an Officer of the State.

This was the attractive title of the Address of Dr. J. P. Thomas, of Pembroke, Ky., as President of the Kentucky State Medical Society, delivered June 23d, 1886. He says that "Alabama, Illinois, North Carolina and Virginia have been gloriously rewarded through the persistent efforts of their Medical Societies" in securing a higher grade of medical education, which must reflect benefit upon the people. We had occasion in our June number to note the remarkable excellence of the rank and file of the North Carolina profession, simply as the result of the twenty-odd years' existence, and thorough examinations required of candidates for practice by their State Board of Medical Examiners.

Without having space to follow the suggestions in their detail, which out-crop from a reading of this ably studied and practical Address, the title itself suggests some pertinent subjects for consideration, to which we can only refer—leaving their study to our readers, in the hope that good will result.

The *doctor* is generally regarded as a necessity in every community. This necessity makes it the more essential that he should be well qualified. His special studies are of such a character that it is rare to find other than brother practitioners in a community who are able to judge of the merits of many questions of medical importance which from time to time arise for legislation, whether by County Boards,

City Councils, or State Legislatures. But in the present relation of the physician to most of the States, he has practically no influence in shaping medical legislation. If perchance doctors are elected as representatives of the people, it is because, in the great majority of cases, they were not competent practitioners, and turn their degraded ambition to the notoriety of the cross-roads politician. He thus does not help the State as a doctor, nor the profession as a legislator. He seeks to do that which the Bible declares impossible—"serve God and mammon." He becomes a nuisance on the stump, and by the continuance of his title of "doctor," he casts a reflection upon an honorable profession.

The people, as a class, not being able to judge of the value of many valuable professional suggestions, are likewise incompetent to pass judgment upon the ability of certain doctors to fill positions of professional trust. Do we not have ample illustrations of this truth on every hand—even in "Alabama, Illinois, North Carolina, and Virginia," which States have been "gloriously rewarded," in the meaning of Dr. Thomas? Are not the cross-roads political doctor and the people filling such positions without an apparent consideration of the vital question of qualification? Read over your lists of physicians to public institutions, prisons, almshouses, health officers, etc.—and who are they? A large percentage of such politically chosen physicians and surgeons are practically unknown to their communities or the profession as doctors of medicine. And yet these very "doctors" that the people place in *official professional positions* are those to whose care they are unwilling to commit themselves in event of sickness, and whose consulting advice the reputable practitioner neither seeks nor cares to have. Their names do not appear upon the record as having ever contributed a suggestion to scientific medicine. They are not even members of the local or State Medical Societies. In short, they are too often perfect *scrubs*. Of course there are honorable exceptions to any such implication, and of course there is many an experienced man who fills such an office who may learn, and finally become a useful man in the profession of medicine.

The North Carolina and Virginia professions, in the manner of choosing their Boards of Medical Examiners, are not liable to the bias of political supremacy. The members of their State Boards are doctors, chosen by doctors. The selection is mostly made on the ground of professional merit. The result is inevitably an advancement, year by year, as

the old pass away and the young come in to take their places as practitioners. Sooner or later, these States will become stocked only by competent physicians and surgeons.

But these State Societies, so commended by Dr. Thomas, must not end their labors here. Step by step they must march on to greater victories—keeping constantly in view the benefit of their communities and the elevated standard of their profession. By untiring perseverance the end must be reached when professional appointments are to be filled by professional selections. Then to be a medical official will be evidence of medical fitness. Then the lost confidence of the people in the “doctor-in-charge” will be restored, and the profession be replaced in the respect and esteem of communities.

Medical Society of Virginia.

The Session will convene in Fredericksburg, Va., on the night of October 26th, 1886. The Secretary's preliminary postal will be issued during this month, and prompt replies are requested. Applications for Fellowship should be forwarded to the Recording Secretary (Dr. Landon B. Edwards, Richmond, Va.), giving name and postoffice in full, name of college and date of graduation in medicine, reference to some Fellow who will recommend the applicant, and initiation fee of \$2—the total annual expense.

Permanent Drainage in Ascites—Authorship.

We do not often demand credits for original work which has appeared in our pages. International plagiarism is, we are proud to say, rarely justly imputed to American authors on medical subjects. While it cannot be said that all writers sufficiently hunt up the literature to give rightful credits for priority, we must add that the editorial staffs of journals are often not sufficiently careful to correct authors of papers contributed to their respective journals. In the May number, 1885, of the *Virginia Medical Monthly* there appeared an article on “Drainage in Ascites,” by Dr. Hugh M. Taylor, of Richmond, Va. In that article, the treatment was brought forward as one hitherto unadvised or tried, and the writer's convictions were strong in favor of its being a justifiable surgical procedure. This opinion was based upon a careful study of the whole subject, and the cure of a case of ascites by drainage through Douglas' cul-de-sac. The cure may have been a coincidence—not a consequence; but in any event it was a published historic fact, and entitled to

be recognized as such. In the *New York Medical Journal*, February 27th, 1886, Dr. Augustus Caillé, of New York city, contributed a paper on "Permanent Drainage in Ascites," and in a more recent issue of the same journal, Dr. Llewellyn Elliott, of Washington, D. C., has an article on the same subject. Both of these gentlemen, unintentionally of course, overlooked Dr. Taylor's claim to priority, but we think it only just to insist that their generosity shall "let him who has won it bear the palm."

To the Liebig Laboratory and Chemical Works Co.,

Of New York, whose advertisement begins in this issue, we wish to return special thanks for a box by express containing some valuable and useful samples of their goods. Their preparations are not of the cheap adulterated class, but all of them are made of the purest drugs that can be selected. All their coca preparations, for example, are made only with directly imported Imperial Crown Sherry; for with no other wine, experience has taught, does coca blend so well. Their "Coca Beef Tonic" preparations with quinia, iron, strychnia, pepsin, pancreatine, phosphorus, etc., have the highest endorsements of the leading practitioners of the world.

Professorship of Practice, Obstetrics, etc., at University of Virginia.

In calling special attention to the advertisement (on the lengthwise inserted sheet) stating that the Board of Visitors will fill the vacancy on August 4th, we hear but one opinion as to who that selection should fall upon—Dr. Wm. C. Dabney, of Charlottesville, Va. His special merits and qualities peculiarly fit him for the place.

Dr. Hunter Mcquire

Has just left for a vacation of five or six weeks on a visit to England. During his absence, St. Luke's Hospital, of this city, will be under charge of Dr. Hugh M. Taylor.

Dr. John G. Trevilian

Has just been elected as Surgeon to the Richmond City Alms House Hospital. A better selection could not have been made. He is a gentleman, learned in his profession, and altogether specially well adapted to the position. It may be safely promised that hereafter the profession gene-

rally will reap some of the advantages which the rare clinical opportunities of such a hospital in their midst afford, and that from time to time reports of instructive cases, etc., will be furnished the journals.

Marshall Lodge Home and Retreat

Is the title of a hospital in Lynchburg, Va., established by the Masonic Fraternity of that city, and is just opened to receive the sick and wounded—except such as have contagious diseases, the insane, and the incurable. Patients are expected to select their own medical attendants from the profession of Lynchburg, and are to pay them the usual professional fees of that city. The prices of board, etc., in this institution (but not including the professional fees) vary from \$5 to \$15 per week, according to room selected, etc. It is, in short, a boarding house for the sick. The Masons deserve credit for the perfection of plans which must give a home and afford comfort to any who may be sick or wounded in that city. We hope it great success. Arrangements are made for the care of a few indigent sick. From our knowledge of the gentlemen who compose the Board of Managers, we are not afraid that the working tools of the Master Mason will grow rusty by non-use in this institution. Address all communications to the Secretary, Dr. C. E. Busey, Lynchburg, Va.

Journalistic.

The Alabama Medical and Surgical Journal is a monthly journal, begun July, 1886, at \$2.50 a year, edited by Drs. J. D. S. and W. E. B. Davis, of Birmingham, Ala., and makes an excellent start. It will be a great help to Southern medical journalism. Its merits make it deserve a large patronage. We place it on our exchange list with pleasure.

Journal of Nervous and Mental Diseases.—This formerly excellent quarterly special journal is now a *monthly* of 78 octavo pages, at \$5 a year. It is published by Messrs G. P. Putnam's Sons, New York. The new management is under the Editorship of the accomplished neurologist, Dr. B. Sachs; and under his hand this journal has grown into one of our favorite exchanges—full, always, of fresh practical matter.

Progress is the title of a monthly medical journal, begun July, 1886, in Louisville, Ky., under the Editorship of Dr. Dudley S. Reynolds—48 pages, \$2 a year. The artistic style of the publication is strikingly attractive, the contribu-

tions are good, and the editorial management is characteristic of the well drilled Editor. He has simply been resting since he had charge of the *Herald*, which he so ably conducted. He returned to editorial duty refreshed by his vacation, and improved by his opportunities for study. We gladly welcome the exchange.

Errata.

On page 279, line 17 from bottom, instead of "It has never passed," substitute *It has now passed, etc.*

A Few Advertisements Named.

Sale of Valuable Mineral Springs—the Healing Springs—is another advertisement that will be of special interest to those who have money to invest.

The other Health Resorts advertised in the same department are likewise of importance just now—especially *Alleghany Springs* and the *Capon Springs and Baths*.

Dr. John N. Upshur's book on "*Disorders of Menstruation*" is very favorably noticed by a number of the medical journals. See clippings on the special lengthwise "insert" after reading matter.

The *Medical College* advertisements are of interest to all our readers. A number of them appear in this issue; others will appear in subsequent numbers.

Obituary Record.

Dr. Meade C. Kemper—Resolutions of Respect.

At a meeting of the Norfolk Medical Society, held February 24th, 1886, the following preamble and resolutions were adopted, and we have been requested to publish them, which we do with mournful pleasure, only regretting that they were sent us too late to appear in their appropriate place in March number, 1886:

The Norfolk Medical Society meets to-day, in no conventional spirit, to place upon record the accustomed resolutions of respect and condolence at the death of a member. While within a very brief period it has been frequently and heavily afflicted by the hands of death, this occasion is one of almost

unexampled solemnity. We have been called upon to mourn the loss on some who have fallen crowned with the honors only acquired by years of labor and experience; of others who have been cut down in the prime of their manhood and their professional success; and of others again who have been snatched away almost upon the threshold of their professional lives. We have cast upon the shrines of these, our brethren, our mournful tributes. But to-day we stand appalled at the suddenness of affliction, and we feel that words are inadequate to express the depth of our sorrow at the unlooked for death of our friend and associate, *Dr. Meade C. Kemper*, who was found yesterday morning dead in his bed, book in hand; the oil of his midnight lamp consumed at the side of his lifeless form, with his features so placid that it could hardly be realized that his was the sleep of death. Dr. Kemper but recently came among us with the highest credentials, bearing an honored name yet a comparative stranger. But his gentle and manly character, his high sense of honor, his varied accomplishments and most engaging manners were at once recognized and appreciated by his colleagues, and all predicted for him a successful career in his new home. But, alas, he is no more; let us, one and all, heed the lesson.

Resolved, therefore, That the Norfolk Medical Society feels, and profoundly mourns, the death of its Fellow, Dr. Meade C. Kemper; that the community has lost in him a citizen it would have been its pleasure to have cherished: that the Society tenders to his distinguished father and his whole family its sincere sympathy and condolence in their bereavement; that we will attend in a body his remains to the depot; that we will wear for the specified time our usual badge of mourning, and that the minutes of this meeting be spread upon its records.

JAMES G. RIDDICK, M. D., Secretary.

Dr. James T. Spencer

died at his home in Farmville, Va., after a somewhat protracted illness, on April 25th, 1886. He joined the Medical Society of Virginia during 1874, and was a useful Fellow. His practice was very extensive in his section of the State, and his loss is severely felt by many warm friends and patrons.

VIRGINIA MEDICAL MONTHLY.

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RICHMOND, SEPTEMBER, 1886.

Original Communications.

ART. I.—**The Discovery of Anæsthesia.*** By HENRY M. LYMAN, A. M., M. D., Professor of Physiology and Diseases of the Nervous System, Rush Medical College; Professor of Theory and Practice of Medicine, Women's Medical College, etc., Chicago, Ill.

For thousands of years the human race has sought, with varying success, for the means of annulling physical pain; but it is only within the experience of the present generation that the progress of discovery has given the power to effect unconsciousness of suffering without appreciable risk of injury to health or loss of life.

The most ancient historical record of the race tells us how the first man was caused to sleep so profoundly in the Garden of Eden that a rib was removed from his side without the occurrence of pain; but, unfortunately, the manner in which this was done is not related. The same record exhibits the hero of the flood plunged in a deep and scandalous sleep under the influence of wine which he had prepared. At the siege of Troy the Grecian army-surgeons

* Read before the Mississippi Valley Medical Society, at Quincy, Ill., July 14th, 1886.

appear to have been skilled in the art of assuaging the pain of injuries by the application of anodyne poultices. Thus Patroclus¹ with his dagger, from the thigh of Eurypylus,

“Cut out the biting shaft; and from the wound
With tepid water cleans’d the clotted blood;
Then, pounded in his hands, a root applied,
Astringent, anodyne, which all his pain
Allay’d; the wound was dried, and stanchd’d the blood.”

Some preparation of opium or of Indian hemp, it may have been, with which, after the ten years’ siege was ended, “fair haired” Helen, once more in her lawful house, coming “out of the sweet-smelling, lofty-roofed chamber,” drove away sad memories from the minds of her husband and his friends, making them drink of wine into which she had cast a drug chosen from the “cunning and excellent” stock presented to her by the Egyptian Princess Polydamna. Most potent drug this same *Nepenthe* must have been, for we are told² that it delivered men from grief and wrath, and caused oblivion of every ill.

It is said³ that among the ancient Assyrians the pain of circumcision was prevented by compression of the veins in the neck. This was doubtless an ancient observation, also noticed by Aristotle in his “History of Animals,” of the possibility of producing temporary unconsciousness by pressure upon the carotid arteries and pneumogastric nerves—a possibility to which attention has been again directed⁴ in modern times.

Dioscorides⁵ and Pliny⁶ assert that the Egyptians possessed a mineral, called by them the *stone of Memphis*, which was used for the production of local anæsthesia. The powdered rock was mixed with vinegar, and was applied in the form of a poultice. This was probably a variety of calcic carbonate which, when treated with an acid, disengaged carbonic acid gas in quantity sufficient to overpower the sensibility of the part to which it was applied.

¹ *Iliad*, Bk. XI., 962-67. *Lord Derby's Translation*.

² *Odysse*, Bk. IV., 220 *et seq.*

³ Casp. Hoffman: *De Thorace*, lib. II., cap. XXIX. Francof. 1627, in fol., p. 77.

⁴ *British and Foreign Med-Chirurg. Review*, vol. XXX., p. 259.

⁵ *Lib.* V., cap. CLVIII. ⁶ *Natural History*, Bk. XXVI., chap. XI., 3.

Throughout the East, from time immemorial, the virtues of opium and of Indian hemp have been known. The fertile plains of India then nurtured the soporiferous poppy—perhaps less abundantly than under the present stimulus of British rule—and the praises of bhang were everywhere whispered among the neophytes in that mystic crew of astrologers, soothsayers, poets, and story-tellers who filled so large a place in oriental life. That the ancient Chinese physicians were acquainted with the pain-destroying quality of this drug is proved by a statement in the biography of Hoatho, a Chinese gentleman who practiced medicine about two hundred and twenty or thirty years after the commencement of the Christian era⁷. He was in the habit of giving to his surgical patients a preparation of *mayo* (Indian hemp), which produced a degree of insensibility as profound as if the sufferer “were plunged in the sleep of intoxication, or deprived of life⁸.” This ancient method has evidently survived in modern Chinese practice, for a recent traveler⁹, visiting the Tung-Wah hospital, in Hong Kong, says of the native surgeons, by whom the institution is conducted:

“They do not use chloroform in operations, but they all asserted, and their assertions were corroborated by Mr. Ng Choy, that they possess drugs which throw their patients into a profound sleep, during which the most severe operations can be painlessly performed. They asserted further that such patients awake an hour or two afterwards quite cheerful, and with neither headache nor vomiting. One of them showed me a bottle containing a dark brown powder which, he said, produced this result, but he would not divulge the name of one of its constituents, saying that it is a secret taught him by his tutor, and that there are several formulas. It has a pungent and slightly aromatic taste.”

The earliest reference to anæsthesia by inhalation is contained in the works of Herodotus, who relates¹⁰ that the Scythians were accustomed to produce intoxication by inhaling the vapors of a certain kind of hemp which they threw upon the fire, or upon stones heated for the purpose.

⁷ *Comptes Rendus de l'Academie des Sciences*, t. XXVIII., p. 197.

⁸ Perrin: *Traite d'Anæsthesie Chirurgicale*, p. 11.

⁹ Isabella L. Bird: *The Golden Chersonese*, p. 111

¹⁰ Rawlinson's *Herodotus*, vol. I., p. 267, and vol. III., p. 54.

This was probably a practice closely allied with the use of *bhang* or *hasheesh* by other oriental people. The Scythian custom may have furnished a remote suggestion for the method of anæsthetic inhalations which was in vogue with Theodoric, a celebrated ecclesiastic and surgeon of the school of Bologna, who was at the height of his reputation (died A. D. 1298) when Dante was meditating the *Divina Comedia*. This Italian surgeon taught the ancient art—transmitted from generation to generation, and by him learned from his father Hugo de Lucca—of preparing a soporific inhalant for the stupefaction of patients who were about to undergo operation. The method¹¹ consisted in causing the patient to breathe the vapor given off from a sponge moistened with warm water after it had been thoroughly steeped in a decoction of opium, deadly nightshade, hyoscyamus, mandragora, hemlock, ivy, and lettuce. Sponges thus medicated were dried in the sunshine, and were stored for use as occasion might require. After the conclusion of an operation the patient was aroused by inhalations of vinegar applied with a fresh sponge to the nostrils. If this expedient failed, the juices of rue might be poured into the ears of the too somnolent victim. Traces of this last mode of medication may be found in the play of Hamlet¹².

But of all the anodyne drugs that were known among the ancients, mandragora seems to have kept the first place. Apuleius and Dioscorides¹³ particularly mention its power to produce insensibility and a loss of consciousness lasting for several hours, a circumstance of which medical men availed themselves when they had recourse to "cutting and burning." Pliny¹⁴ asserts the same thing, and also adds that some persons were rendered insensible by merely inhaling the vapor of the plant¹⁵. Apuleius writes: "If any one is to have a member mutilated, burned, or sawn, let him drink half an ounce with wine, and let him sleep till the member is cut away without any pain or sensation." Dioscorides¹⁶ taught that the sleep thus produced might continue

¹¹ Perin: *op. cit.*, p. 7.

¹² *Act I., Scene V.* ¹³ Book IV., p. 76.

¹⁴ *Natural History*, Bohn's edition, vol. V. p. 139.

¹⁵ *Medicaminibus Herbarum*, cap. 129. ¹⁶ *Loc cit.*

for three or four hours; hence, no doubt, various legends which were by Shakespeare woven into the network of the story of Juliet.

This infusion of mandragora in wine was known to the Greeks by the name of *morion*, and its use was common among the surgeons who flourished two thousand years ago¹⁷. The wine mingled with myrrh¹⁸ which, according to the custom of the kind hearted Jewish women of that day, was offered to Jesus on the cross, but which he refused to drink, was unquestionably this same mandragora wine, for it was a practice among pitying souls to furnish this pain-defying drug to those who were about to suffer the horrors of crucifixion¹⁹. During the Middle Ages, down to comparatively modern times, it was not uncommon to find prisoners who underwent torture manifesting little consciousness of pain, because they had well fortified themselves with some preparation of mandragora²⁰. Indications of its use in regular medical practice are found even in the light literature of the period. For example, Boccaccio, writing²¹ in the middle of the fifteenth century, relates the story of a surgeon who, for the relief of a patient whom he desired to subject to an operation for necrosis of the bones of the leg, "distilled in the morning a water of a certain composition of his own, which, when the patient had drunk of it, would keep him asleep as long as the operation might last." Jacques Yver, of Poitou, also exclaims, in his essay on "Springtime," "I am so delighted (pardon me if I cannot lie) that, like a patient set to sleep with mandragora for the purpose of cutting off a limb, I do not feel my disease." "This probably was the narcotic given to Augustus II., King of Poland, so famous during the latter years of the seventeenth century for his strength and his gallantry. While insensible from the effects of a drug, he underwent amputation of one of his feet without feeling pain."

The heroic use of these narcotic herbs gradually diminished as the superstitions of the middle ages and the arts of

¹⁷ *Galen* VII., 207. ¹⁸ *Mark* XV., 23.

¹⁹ Renan, *Vie de Jesus*, XVII ed., p. 432.

²⁰ Perrin, *op cit.*, pp. 8-11. ²¹ *Decameron*, *Fourth day*, Novel X.

the sorcerer fell into disrepute after the Reformation of the Church in Germany. Works on demonomania and the art of magic still praised the virtues of mandragora; but when Sassard,²² a Parisian surgeon, wrote, A. D. 1781, recommending the administration of a narcotic before capital operations, he appears to have had in view the avoidance of shock, rather than any prospect of complete relief from pain.

A curious passage in an old volume,²³ composed by Jean Baptiste Porta, describes the preparation and administration of certain volatile substances, of which the effects appear to have closely simulated the effects of ether.

"These substances," wrote the author, "were converted into an essence which had to be kept in leaden vessels, hermetically sealed, to prevent the escape of its volatile part. Without such precautions the remedy lost all its virtues. When required for use, the cork was removed, and the flask was applied to the nostrils of the patient, who inhaled the volatile essence till his senses became, as it were, locked up in a citadel, and buried in a sleep so profound that only by the greatest violence could he be aroused. After awaking from such sleep there was no headache, nor any recollection of what had taken place."

In a little volume²⁴ composed by the celebrated Albertus Magnus, the learned Professor of Philosophy at Cologne, afterwards member of the Faculty of the University of Paris, finally Archbishop of Ratisbon, and preceptor of the famous Thomas Aquinas, is a formula for the preparation of a liquid which he called *aqua ardens*. This "firewater" was obtained by distillation from a mixture of red wine, quicklime, common salt, tartar, and green figs. Such a process, probably learned from his contemporary, Arnauld de Villeneuve,²⁵ who had been taught the art of distillation by the Moors in Spain, would undoubtedly yield a very highly concentrated alcohol, perhaps charged with a certain trace of ether which, when applied to the nostrils, might have sufficed to produce anæsthesia, very much as it may now be effected by the inhalation of an impure sulphuric ether.

²² "Dissertation sur les moyens de calmer la douleur." *Jour. de Physique*, 1781.

²³ *Natural Magic*, A. D. 1608, VIII., I.

²⁴ *Liber de mirabilis mundi*, A. D. 1555.

²⁵ *Dic. Encyc des Sci. Med.*, art. "Arnauld de Villeneuve.

As the knowledge of physicians increased, the hardihood of their experiments with narcotic drugs diminished. Probably a certain number of the patients who are said to have slept three or four days did actually fail to awaken at the expected time. At any rate this heroic practice seems to have fallen out of use; and at the close of the eighteenth century we find civilized surgeons limiting their efforts to the moderate use of opiates, with recourse, in certain cases, to the effects of intoxication with brandy²⁷. Refrigeration of the tissues,²⁶ and the processes of hypnotism²⁸ were occasionally employed for the relief of pain. An English surgeon, named James Moore, published, in the year 1784, a tract entitled "A Method of Preventing or Diminishing Pain in Several Operations of Surgery." The method consisted in the application of pressure, by means of properly adjusted clamps, to the trunks of the principal nerves leading to the member upon which an operation was to be performed. The disadvantages of such a method were, however, so obvious that, after a number of trials by various surgeons in England and France, it passed into oblivion.²⁹

The very tardy progress thus far noted towards a really satisfactory production of artificial anæsthesia was evidently owing to the rudimentary condition of chemical science. The great advance in this department of knowledge which had been effected by the labors of Scheele, Lavoisier, and Priestley, during the latter half of the last century, could not fail to increase the acquaintance of mankind with numerous agents potent to modify the functions of the animal economy. As the properties of newly discovered gases were studied, the hope arose that among them might be found something valuable for the medication of pulmonary diseases. During the year 1798, in the little village of Clifton, near Bristol, in England, was founded a Pneumatic Institution, for the treatment of various diseases by inhalation of different gases. The originator of this scheme was Dr. Thomas Beddoes, (the father of Thomas Lovell Beddoes, the poet,) a man of great natural ability and extensive ac-

²⁶ Perrin, *op. cit.*, p. 16. ²⁷ *Op. cit.*, p. 16. ²⁸ *Op. cit.*, pp. 21-37.

²⁹ *Op. cit.*, pp. 13-15.

quirements, who, born in 1754, graduated in medicine at Oxford, studied in Paris under Lavoisier, and then lectured on chemistry at Oxford until the year 1792, when his sympathies with the French revolutionists led to his removal from the University. His attention had been at an early period of his life directed to the treatment of consumption, and he now devoted his leisure to the work of establishing an institution in which this disease might be treated by a pneumatic method. Through the liberality of the celebrated potter, Josiah Wedgewood, he was at length enabled to realize his purpose; but the practical results in the treatment of disease were by no means equal to his sanguine anticipations.

But the final outcome of the institution was of the utmost importance to mankind, for it gave to the world nitrous oxide gas and Sir Humphrey Davy. Requiring an assistant in the laboratory of his institution, Dr. Beddoes made the acquaintance of a young medical student, who, though only nineteen years old, had already alarmed his friends by the violence of the explosions which he had produced in the garret where he pursued the study of chemistry. Assuming the care of the new laboratory, young Davy immediately launched out upon that brilliant career which made his name one of the most famous in the annals of science. It was but a few months before he made the discovery of the intoxicating effects of *nitrous oxide gas* (April 9, 1799). Had his remarkable ability been less, the full knowledge of its anæsthetic properties might possibly have long antedated its final consummation; but in 1801 he was transferred from the humble sphere of a provincial hospital to the vastly wider field of scientific research that was opened by the foundation of the Royal Institution, in London, where his time was henceforth occupied with the work of original discovery, without any special reference to the medical and therapeutical relations of such work. The possibilities of the subject, however, did not escape his notice. He had succeeded by its use in calming the pain that was caused by the eruption of a wisdom tooth, while experimenting at Clifton, and he recorded his opinion in the following words:

“As nitrous oxide, in its extensive operation, seems capable of destroying physical pain, it may probably be used with advantage in surgical operations in which no great effusion of blood takes place.” The essay which contained this most suggestive sentence was widely read, but no one seemed inclined to pursue the investigation to its legitimate conclusion. His experiments were repeated all over the world, though with varying results, owing to the difficulties which then attended the purification and administration of the gas. The rubber bags which are now so invaluable to the chemist, were then unknown, and experimenters were obliged to content themselves with quantities of the gas so insignificant that an exhilarating effect was usually the only result of its inhalation. Sometimes, however, an inordinately susceptible individual would become insensible, or perhaps would be convulsed, during the act of inhalation, so that cautious physicians were not disposed to look with favor upon the use of the gas.

As nitrous oxide thus seemed destined to be remembered only as one of the curiosities of the chemist, the properties of *sulphuric ether* became gradually known in an empirical way, chiefly among druggists and medical students. Employed, as early as 1785, by Dr. Pearson, of Birmingham, Eng., for the relief of spasmodic asthma, and described by himself in a pamphlet of that date, it was further noticed by Dr. Beddoes, who related, in his work on “Medicinal Use of Factitious Airs” (A. D. 1794–1796), a case in which Dr. Thornton (who appears to have been associated with Dr. Pearson) caused a woman, suffering with a painful inflammation of the breast, to inhale the vapor of sulphuric ether. A glass jar was filled with ether vapor by setting fire to a small quantity of the liquid, and the patient inhaled the gases and vapors thus liberated. At the expiration of about two minutes, she became pale, and “fainted away” in the arms of a servant. She recovered consciousness in about ten minutes, and for the first time in several weeks was free from pain.³⁰

So long ago as the year 1805, Dr. Warren, of Boston,

³⁰ Perrin, *op. cit.*, p. 40.

Massachusetts, made use of inhalation of ether in the treatment of the later stages of consumption.³¹ Nysten, in the earlier editions of the "Dictionary of Medical Sciences," speaks of the relief of colic by the inhalation of the vapor of ether. "About the year 1812, in Philadelphia, at a time when nitrous oxide was the subject of popular lectures, the vapor of ether was frequently breathed from a bladder for experiment or diversion, and its effects in producing a transient intoxication analogous to that caused by the nitrous oxide were observed."³²

In 1818, the *Journal of Science and the Arts*, published at the Royal Institution, in London, contained the following anonymous paragraph, since attributed to Faraday:

"When the vapor of ether, mixed with common air, is inhaled, it produces effects very similar to those occasioned by nitrous oxide. * * * It is necessary to use caution in making experiments of this kind. By the imprudent inspiration of ether a gentleman was thrown into a very lethargic state, which continued, with occasional periods of intermission, for more than thirty hours, and a depression of spirits; for many days the pulse was so much lowered, that considerable fears were entertained for his life."

The substance of this unlucky paragraph became a standard quotation in the works on materia medica³³ and toxicology,³⁴ where it served as a bug-bear to intimidate all scientific experimenters during the next quarter of a century. The physiologists, also, by their experiments on the lower animals contributed largely to the dread with which the profoundly stupefying energy of ether was regarded. Orfila,³⁵ R. C. Brodie³⁶ and Giacomini³⁷ had all recorded observations of this character before the year 1839. This gloomy record was doubtless the cause of the prevailing indifference of surgeons to the narcotic properties of ether; but the delightful exhilaration produced by its vapor caused its increasing use by foolish young people in various parts of

³¹ Wood and Bache, *U. S. Dispensatory*, 1834. ³² *Op. cit.*

³³ Pereira, *Elements of Materia Medica*, 1839, pp. 210-11.

³⁴ Christison, *On Poisons*, 1836, p. 804.

³⁵ *Toxicologie Generale*, 4e edition, t. II, p. 531.

³⁶ Quoted in *Journ. de Medicine, de Leroux*, t. XXVI, p. 32.

³⁷ *Encyc. des Sci. Med.*, 1839, p. 57.

the world, who were seeking excitement without the disreputable associations connected with the use of alcoholic stimulants. During the year 1839, a young student of chemistry, in the city of Rochester, N. Y., William E. Clarke by name, now a veteran physician in Chicago (1886), was in the habit of thus entertaining his friends with inhalations of ether. Among the participants in these frolics was another young man, named William T. G. Morton, who afterwards became a dentist. At the Berkshire Medical College, during the winter of 1841-42, Clarke diligently propagated this convivial method among his fellow-students. Emboldened by these experiences, in January, 1842, having returned to Rochester, he administered ether, from a towel, to a young woman named Hobbie, and one of her teeth was then extracted without pain by a dentist named Elijah Pope.

Such boyish experiments were not confined to any particular section of country. This portion of the history has been fully treated in this journal (*Virginia Medical Monthly*) by the late J. Marion Sims, M. D. One day, during the year 1839, a party of boys in Anderson, South Carolina, were exhilarating themselves with the seductive vapor. In their excitement they seized a young negro, who was watching the antics of his betters, and by main force compelled him to inhale the ether from a handkerchief, which was held over his mouth and nose. At first his struggles only added to the amusement of his captors, but soon they ceased;—the boy was unconscious, motionless, stertorous, apparently dying. But after an hour of consternation on the part of the spectators, he revived, and was no worse for his alarming experience. Three years after this incident, one of the actors in the affair, a young man named Wilhite, entered the office of Dr. Crawford W. Long, a physician who was then practicing in the town of Jefferson, Jackson county, Georgia. The worthy doctor and his pupils were in the habit of diversifying their more serious occupations by the inhalations of ether; and during the course of this amusement, he often observed that while thus excited he was quite insensible to the effects of the blows and bruises which were sustained while in this condition. Young Wilhite's account of his experience with

the negro boy who had been unconscious for an hour without injury, added courage to his meditations; and in March, 1842, he persuaded a patient, from whose neck he was about to remove a tumor, to inhale ether until quite insensible. The operation was then performed without pain, and recovery followed without any accident. This great event was thus simply recorded by Dr. Long in his ledger:

“James Venable, 1842—Ether and excising tumor, \$2.00.”

Three months later another tumor was removed by the Doctor, under similar circumstances, from the same patient. Three other persons were operated upon with equal success, during the same year; and the experiment was again repeated in 1843 and in 1845. But as the region of country in which he lived was then—before the days of railways and telegraphs—so far removed from contact with the great world, the wonderful discovery remained unknown beyond the immediate neighborhood until long after the narcotic properties of ether had been fully investigated elsewhere.³⁸

The next step on the pathway of experiment was taken in Hartford, Conn., on the evening of December 10th, 1844. Mr. G. Q. Colton, an itinerant lecturer, undertook to divert the citizens of the venerable town by an exhibition of the effects of “*laughing gas*.” An ingenious dentist, named Horace Wells, was present, and made note of the fact that one of his friends, a Mr. Samuel A. Cooley, who had contused and abraded both of his shins by collision with the benches while under the influence of the gas, was quite unconscious of pain during the period of inhalation. Here was the very thing for which he had so often longed—an agent capable of annulling pain during the extraction of teeth. He immediately expressed this opinion to the bystanders, and fully discussed the matter that evening with his friend, John M. Riggs, a prominent dentist in Hartford.³⁹ He resolved that the first attempt should be made upon himself, and he accordingly called upon Mr. Colton the next morning to secure his co-operation in the experiment. Mr. Colton readily consented, and the two men repaired at once, with a bag of

³⁸ C. W. Long, *Southern Med. and Surg. Journ.*, Dec., 1849.

³⁹ Truman Smith: *An Inquiry Into the Origin of Modern Anæsthesia*, p. 16.

the gas, to the office of Mr. Riggs, who has related the incident in the following words: ⁴⁰

“Dr. Wells took a seat in the operating chair; I examined the tooth to be extracted with a glass, as I usually do. Wells took a bag of gas from Mr. Colton, and sat with it in his lap. Wells then breathed the gas until he was *much* affected by it; his head chopped back; I put my hand to his chin; he opened his mouth, and I extracted the tooth. His mouth still remained open some time. I held up the tooth in the instrument that the others might see it; they, standing partially behind the screen, were looking on. Dr. Wells soon recovered from the influence of the gas, so as to know what he was about, discharged the blood from his mouth, swung his hand, and said, ‘A NEW ERA IN TOOTH-PULLING!’ He said it did not hurt him at all. We were all much elated, and conversed about it for an hour after.”

The two dentists, Wells and Riggs, immediately adopted the new method in their practice, and in the course of a few weeks had, without inflicting pain, extracted teeth from a number of different patients. In only two or three instances was there any failure to produce complete insensibility.

A knowledge of the analogous properties of *sulphuric ether* at once attracted the attention of Dr. E. E. Marcy, a surgeon residing in Hartford, to that substance. And near the close of the year 1844, he administered the vapor of ether to a patient in his office, from whom he then removed an encysted tumor of the scalp, “about the size of an English walnut. Mr. Wells came in during the operation, and sufficiently early to form an opinion upon the subject.”⁴¹ The operation was entirely successful, and conclusively proved to all who were present the anæsthetic properties of the vapor of ether. But having been warned by Professor Rogers, of Trinity College, that ether was “dangerous to life,”⁴² they decided to abandon its use in favor of nitrous oxide gas, which was supposed to be safer and more efficacious.⁴³

Immediately after these experiments, about the 1st of January, 1845,⁴⁴ Horace Wells proceeded to Boston for the purpose of introducing his discovery in that city. He vis-

⁴⁰ *Works of Sir James Y. Simpson*, Vol. II, p. 27.

⁴¹ Truman Smith: *Op. cit.*, p. 54.

⁴² *Op. cit.*, p. 52. ⁴³ *Op. cit.*, p. 54. ⁴⁴ *Op. cit.*, p. 57-144.

ited the celebrated surgeon, John C. Warren, and offered to demonstrate his method by extracting a tooth, without pain, from a patient under the influence of gas, in the presence of the students in the Harvard Medical School. The offer was accepted. A large class of young men—critical spectators of the event—were assembled in the lower lecture room of the old college building on Mason street. The patient was introduced, an inhaling-bag was applied to his face; he seemed insensible. The tooth was forced from his jaw. Alas! The volume of gas had been insufficient, and a cry of pain in the arena was followed by a tumultuous storm of hisses from the benches above. The doom of nitrous oxide gas had been pronounced beyond all manner of doubt, despite the fact that the patient, on recovery of consciousness, declared that he had felt no pain whatever. Returning home, sick with mortification and disappointment, Wells was, for a considerable time, obliged to abandon the practice of dentistry. But by his associates the use of gas was continued: so that it became “a subject of profound interest in Hartford, and attracted universal attention”⁴⁵ in that little community, until, on the 17th of October, 1846, there occurred an event of such importance that for many years the minds of men were completely diverted from further consideration of the anæsthetic use of nitrous oxide.

It will be remembered that one of the reckless boys who was playing with ether in the city of Rochester, previous to the year 1840, was named William T. G. Morton. Leaving his Western home about the year 1841 or 1842,⁴⁶ he commenced the practice of dentistry in the village of Farmington, Conn., nine miles west of Hartford. Feeling the need of a better acquaintance with his art, he frequently visited Horace Wells, for the purpose of receiving instruction and assistance in the more difficult parts of his work. Sometime in 1843, having taken a wife, and feeling emboldened to enter the field of city practice, he removed to Boston. There for a short time his preceptor was associated with him in partnership, for the purpose of introducing a

⁴⁵ *Op. cit.*, p. 46.

⁴⁶ *Op. cit.*, p. 56.

peculiar solder for plate-work, which Wells had recently invented.⁴⁷ But, with his usual fatal versatility, the elder partner could not long apply himself to the work of pushing this invention. He soon returned to Hartford, where his experiences with nitrous oxide during the following year have already been related. When he again visited Boston, he called upon Morton, and also upon Dr. Charles T. Jackson, an eminent chemist, whose acquaintance he had previously formed. To them he related his experiments, but they both ridiculed the idea of any practical results from such use of the gas.⁴⁸ But the active mind of Morton did not surrender the idea which had been then and there implanted—the idea of painless dentistry. Could some easy and efficient method of procuring insensibility be devised, how many teeth might be profitably extracted from the mouths of thousands who were hesitating and delaying application for artificial sets of teeth! Undoubtedly, he was informed from time to time of the use of nitrous oxide by his former associates in Hartford. Recollections of his frolics with William E. Clarke in Rochester must have directed his attention to ether as a possible agent for the relief of pain. During his leisure hours he attended lectures at the Harvard Medical College, personally assisting⁴⁹ in the experiments with nitrous oxide and similar agents that were exhibited to the students. During the summer of 1846, he was continually occupied with the subject. He applied ether to decayed teeth, thereby greatly relieving the patient. On several occasions he administered the vapor of ether to his dog. He studied the text-books on *materia medica*, and questioned apothecaries regarding the properties of ether, until he became satisfied that it was possible to produce complete insensibility with its vapor. The only remaining difficulty was the bug-bear of danger. Everybody said that ether was a dangerous drug. Morton wished to test this doctrine, but it was difficult to secure opportunities for experiment.

During the month of August, 1846, he explained his be-

⁴⁷ *Op. cit.*, p. 10.

⁴⁸ *Op. cit.*, pp. 57–60.

⁴⁹ *Senate Report on Petition of Wm. T. G. Morton*, Feb. 14, 1863, p. 12.

liefs to his partner, Mr. G. G. Hayden, and tried to persuade his dental students to inhale the vapor. Failing to overcome their timidity, he sent them in search of a good, stout Irishman, if perchance such an one might consent to yield himself as a subject for experiment. No person could be found willing to risk a valuable life in such a cause; so the dog was again pressed into service.⁵⁰ This time the animal struggled violently, and broke the ether-bottle, spilling nearly all its contents. Morton saturated his handkerchief with the remainder, and inhaled the vapor. "Soon a feeling of lassitude came over him, followed by a complete, but very momentary, state of unconsciousness." But having exhausted his stock of ether, the experiment was carried no further at that time.

Several weeks now passed before the occurrence of anything decisive. This delay was largely due to the secrecy with which Morton surrounded his researches. He desired something that could be made his own exclusive property. Hence the roundabout way in which he supplied himself with ether, and hence the affectation of ignorance with which he approached every one who might be supposed to know anything about the qualities of the substance. Visiting Hartford, he had once asked Mr. Wells to instruct him in the preparation of nitrous oxide, but his former teacher had advised him to procure the gas from Dr. Charles T. Jackson, in Boston. Calling, therefore, about the 29th of September, 1846, upon Dr. Jackson, he requested him to prepare a quantity of nitrous oxide for his use. The doctor refused to do so,⁵¹ alleging a want of time as his reason. He, however, told Morton that if he would pour a little sulphuric ether upon a handkerchief, its vapor could be inhaled so as to produce insensibility and unconsciousness. Dr. Jackson was fully competent to give this advice, for he was a learned chemist, well read in the literature of his profession; and he had, moreover, during the month of February, 1842, had a little personal experience of the narcotic energy of ether, thus related by himself:⁵²

⁵⁰ *Op. cit.*, p. 18.

⁵¹ Truman Smith: *Op. cit.*, p. 63.

⁵² *A Manual of Anæsthesia*, pp. 18-19, quoted by Truman Smith, *op. cit.*, p. 80.

"I accidentally got my lungs full of chlorine gas, which nearly suffocated me, so that my life was in imminent danger. . . . The next morning my throat was severely inflamed, and very painful. . . . Soaking my towel in ether, I placed it over my mouth and nose, so as to allow me to inhale the vapor, and began to inhale the ether into my lungs." Unconsciousness was soon reached, and, with his feet on another chair, he fell into a painless sleep as he sat in his rocking-chair.

To this advice Morton listened with eager intelligence; but, for his purposes, it was necessary to dissemble. "Sulphuric ether? what sort of stuff is that?" Jackson showed him a bottle of the liquid.⁵³ "Is it a safe thing to use?" "Oh, yes, perfectly safe." And then followed a story of some college students at Cambridge who had inhaled its vapor. Finally, Dr. Jackson advised Morton to breathe it himself.

The very next day, therefore, the 30th of September, 1846, Mr. Morton provided himself with a flask of ether from which the vapor could be inhaled through a tube. He has recorded his experience in the following words:⁵⁴

"Taking the tube and flask, I shut myself up in my room, seated myself in the operating chair, and commenced inhaling. I found the ether so strong that it partly suffocated me, but produced no desired effect. I then saturated my handkerchief and inhaled it from that. I looked at my watch, and soon lost consciousness. As I recovered I felt a numbness in my limbs, with a sensation like nightmare, and would have given the world for some one to come and arouse me. I thought for a moment that I should die in that state, and the world would only pity or ridicule my folly. At length I felt a slight tingling of the blood in the end of my third finger, and made an effort to touch it with my thumb, but without success. At a second effort I touched it, but there seemed to be no sensation. I gradually raised my arm and pinched my thigh, but I could see that sensation was imperfect. I attempted to rise from my chair, but fell back. Gradually I regained power over my limbs, and full consciousness. I immediately looked at my watch, and found that I had been insensible between seven and eight minutes.

⁵³Truman Smith: *Op. cit.* p. 63.

⁵⁴*Senate Report*, Feb. 16, 1863, p. 18.

"Delighted with the success of this experiment, I immediately announced the result to the persons employed in my establishment, and waited patiently for some one upon whom I could make a fuller trial. Toward evening a man (Eben Frost, residing in Boston) came in, suffering great pain, and wishing to have a tooth extracted. He was afraid of the operation, and asked if he could be mesmerized. I told him I had something better, and saturating my handkerchief, gave it to him to inhale. He became unconscious almost immediately. It was dark, and Dr. Hayden held the lamp, while I extracted a firmly-rooted bicuspid tooth. There was not much alteration in the pulse, and no relaxation of the muscles. He recovered in a minute, and knew nothing of what had been done to him. He remained for some time, talking about the experiment."

Calling at once upon Dr. Jackson, Morton informed him "that the ether had worked nicely—that the patient suffered no pain."⁵⁵

An event so remarkable could not be long hid from the public. The newspapers got wind of the affair, and patients flocked in to have their teeth extracted without pain. Morton would not reveal the name of the substance which he used. He was meditating a patent-right to its exclusive use. He finally called it "Letheon," and made a considerable mystery of its composition. But, in order to stamp its use with the seal of unimpeachable approbation, it was necessary to introduce the article into the Massachusetts General Hospital, and there to have it tried by the distinguished surgeons of that institution. On the 4th of October, therefore, he called upon Dr. John C. Warren, whose lectures he had attended at the Harvard Medical School, told him the story of his experiments, and begged the privilege of exhibiting his discovery in a capital operation at the hospital. Dr. Warren good-naturedly consented, and promised to inform him of the first opportunity for such a demonstration. More than a week, however, passed away, leaving Morton busy with the administration of "letheon" to his dental patients; but there was nothing from Dr. Warren. At last, after a delay of ten days, he received the following note:

"DEAR SIR,—I write at the request of Dr. J. Warren to invite you to be pres-

⁵⁵ Truman Smith: *Op. cit.*, p. 63.

ent on Friday morning, at 10 o'clock, at the Hospital, to administer to a patient who is then to be operated upon, the preparation which you have invented to diminish the sensibility to pain.

Yours, respectfully,

C. L. HAYWOOD,

House-Surgeon to the General Hospital.

Dr. Morton, Tremont Row. October 14, 1846."

Here, at last, was the much coveted opportunity. Morton conferred with his friend Dr. A. A. Gould, a distinguished physician, who had greatly interested himself in devising an inhaler furnished with tubes and valves which were supposed to add greatly to the certainty of the process of inhalation. The instrument maker, Chamberlain, undertook to have the apparatus ready in time, but, like other mechanics, was behind with the work; so that, at the last moment, Morton had to snatch the instrument from his hands and hurry to the hospital, where he arrived a little later than the appointed hour. In the mean time the usual throng of students and spectators had filled the benches under the dome in the old surgical theatre. The surgeons entered the arena; the patient was brought in and was placed upon the operating table. A varicose tumor upon the side of the neck was to be removed. Everything was ready; Dr. Warren was about to commence, when he suddenly turned to the spectators and remarked that he now remembered a promise to allow a dentist, named Morton, to give this patient "something which he thought would prevent pain." As the dentist was not present he would wait a little while. Ten or fifteen minutes passed. The students grew uneasy on their benches; the surgeons winked and smiled; at length Dr. Warren wagged his head and exclaimed, "As Dr. Morton has not arrived, I presume he is otherwise engaged!" A responsive roar of laughter filled the dome; the doctor grasped his scalpel and was approaching his patient when the door flew open and Morton stumbled into the room, all out of breath with haste. There was an immediate pause, a hum of consultation; then Morton took his place at the head of the patient, and applied to his mouth a strange looking piece of apparatus which he had brought with him. A smile of cheerful incredulity rippled among the spectators, and deepened into an audible gurgle of derision as the pa-

tient became excited during the early stage of inhalation. But suddenly the anæsthetic effects appeared, and an involuntary movement of surprise agitated the entire assembly as Mr. Morton coolly informed Dr. Warren that his patient was ready.

“As Dr. Warren, seizing the bunch of veins in his hand, made the first incision through the skin, the patient made no sound, nor moved one muscle of his body. As the operation progressed, all eyes were riveted on this novel scene in eager expectancy and amazement. The silence of the tomb reigned in the large amphitheatre, and the form of each beholder was as still and immovable as the skeletons and mummies which hung in the cases behind them⁵⁶.” When fully restored to consciousness the patient said, “I have experienced no pain, but only a sensation like that of scraping the part with a blunt instrument.”

Here, surely, was something far more potent than the contents of poor Horace Wells’ unlucky gas-bag, concerning which several bystanders still retained no very favorable recollection. So gratifying was the result of this experiment that Morton was allowed to use his apparatus the next day upon another patient in the hospital—a woman with a fatty tumor on the right shoulder. This time there was complete insensibility—no form of success could have been more perfect.

But now, a great difficulty arose, What was this wonderful narcotic which filled the amphitheatre with its vapor, so that when it was used the attendants were compelled to burn aromatic herbs in order to mask its mysterious emanations?⁵⁷ Morton would not disclose the secret, and was, consequently, bowed out of the hospital. The wise old surgeons, Hayward and Warren, would have nothing more to do with an unknown compound. The hospital relapsed into its former routine of painful surgery, while Mr. Morton continued his experiments in his dental office, where there was now no lack of willing subjects. Fortunately for the honor of the medical profession, there was one young man whose enthusiasm had been thoroughly aroused by the new

⁵⁶ Dr. A. A. Gould, *Senate Report*, Feb. 14, 1863, p. 23.

⁵⁷ *Senate Report*, p. 25.

discovery. The subsequently famous surgeon, Henry J. Bigelow, visited Morton and watched the wonderful process as patient after patient was subjected to the narcotic vapor. *Letheon, ether, whatever it might be*—here was something too valuable to be lightly brushed aside. Morton was taking active measures to secure a patent for his compound. Dr. Bigelow advised him to publish his discovery to the world, for no patent could maintain him in the solitary enjoyment of a blessing so inestimable. At last, on the 6th of November, Morton yielded so far as to call upon Dr. Warren, and to address the medical staff of the hospital through the medium of a letter, offering the free use of his discovery, and full confidential information regarding its nature. He was, consequently, invited to visit the hospital on the following day, to etherize a patient who was to undergo amputation of the thigh. This invitation, however, was almost immediately withdrawn. Calling, in the evening of the same day, upon Dr. Bigelow, that gentleman cordially undertook to overcome all obstacles, and carried Morton with him to the hospital just as the operation was about to be performed. The patient, a girl named Alice Mohan, had received a dose of laudanum as an all sufficient anæsthetic,⁵⁸ and was waiting in the ante-room of the operating theatre. Leaving his companion in an outer room, Dr. Bigelow followed his seniors, and “there strongly urged the employment of the yet ostensibly secret agent; partly on the ground that it then was really known, but especially from the consideration that humanity ought to supersede any doubts connected with professional etiquette. This and other considerations prevailed, and after a delay of half an hour Morton, whose presence had been till then unknown, was brought up, and the patient was etherized.⁵⁹ This celebrated operation was described by Dr. Hayward as follows:⁶⁰

“The operating room was crowded; many were obliged to stand. Besides the class of students in attendance on the lectures, numbering more than a hundred, and many of the principal physicians and surgeons of the city and neighbor-

⁵⁸ H. J. Bigelow, *Am. Jour. Med. Sci.*, Jan. 1876, p. 179.

⁵⁹ H. J. Bigelow, *loc. cit.* ⁶⁰ *Senate Report*, Feb. 14, 1863, p. 26.

hood, there were present several clergymen, lawyers, and other individuals from the various callings of life. When I entered the theatre, before the patient was brought in, I found it, to my surprise, filled in every part, except the floor on which the table stood, with persons on whose countenances was depicted the almost painful anxiety with which they awaited the result of the experiment they were about to witness. I simply told them that I had decided, with the advice of my colleagues, to allow the patient on whom I was to operate to inhale an article which was said to have the power of annulling pain. The patient was brought in. She was a delicate looking girl of about twenty years of age, who had suffered for a long time from a scrofulous disease of the knee-joint. It had at length suppurated; there were extensive openings into the cavity of the joint; the cartilages were ulcerated, and partly absorbed; the bones carious, and symptoms of hectic fever had already made their appearance.

“As soon as she was well arranged on the table I told her that I should let her breathe something which I hoped would prevent her from suffering much from the operation, and that she need not be afraid of breathing it freely.

“As the ether was at that time administered by means of a large and clumsy instrument which required, to some extent, the coöperation of the patient, it was desirable that the amputation should be done as rapidly as possible. Everything, therefore, was arranged with this view. I decided to perform the flap operation. One person was to compress the artery, another to withdraw the flaps, a third to hand the instruments, and a fourth to watch the pulse. I grasped the patient's limb with my left hand, and held the amputating knife behind me in my right, carefully concealed from her view. The mouth-piece of the inhaling instrument was then put into her mouth, and she was directed to take long inspirations. After breathing in this way a short time, the nostrils were compressed, so that all the air that went into the lungs must first pass through the machine, and, of course, be mixed with the vapor of the ether. She breathed with perfect ease, and without struggling, and in about three minutes from the time the instrument was put into her mouth Dr. Morton said, ‘she is ready.’ A deathlike silence reigned in the room; no one moved, or hardly breathed. I passed the knife directly through the limb, and brought it out as rapidly as I could, and made the upper flap. The patient gave no sign of feeling or consciousness, but looked

like one in a deep, quiet sleep. Every other person in the room took a full inspiration that was distinctly audible, and seemed to feel that they could now breathe again. The second flap was then made, the bone sawed, five arteries were tied, and as I was tightening the ligature upon the sixth and last she groaned, being the first indication of sensibility that had been given. Nothing more was done than to bring the flaps together, cover the stump with cloths dipped in cold water, and apply two or three turns of a roller to keep them in place. Her consciousness soon returned; she was wholly ignorant that the operation had been done. For some time she would not believe it, and said that she had felt nothing till I tied the last artery."

A demonstration like this was irresistible. Other surgeons immediately began to administer ether. On the 9th of November, 1846, Dr. Henry J. Bigelow read before the Boston Society of Medical Improvement, a paper⁶¹ describing his experiments and observations with Morton. The news spread as fast as telegraph and mail could carry the tidings. The dentists were everywhere the first to employ the new method, and the leading surgeons of the cosmopolitan cities throughout the world followed suit as fast as they could make the necessary arrangements. For a short time at first, it is true, there was much opposition to the use of ether.⁶²

A medical journal of New York announced, in its issue for January, 1847, that "the last special wonder has already arrived at the natural term of its existence. It has descended to the bottom of that great abyss which has already engulfed so many of its predecessor novelties, but which continues, alas! to gape until a humbug yet more prime shall be thrown into it."

The *New Orleans Medical Journal* of the same date remarked: "That the leading surgeons of Boston could be capable of such an invention as this excites our amazement. * * * Why, *mesmerism*, which is repudiated by the *savants* of Boston, has done a thousand times greater wonders."

In Philadelphia, it was a full year after the triumph of

⁶¹ *Boston Med. and Surg. Journ.*, Nov. 18, 1846.

⁶² *Senate Report*, Feb. 14, 1863, p. 30.

ether in Boston before the surgeons of the Pennsylvania Hospital could reconcile its use with the doctrines of the Bible, the U. S. Dispensatory, and the Code of Medical Ethics. Once introduced, however, they became its warmest advocates, and so remain to this day.

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ART. II.—**The Baby's Growth.** By WILLARD H. MORSE, M. D.,
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The recognition of the direct standard of growth during early childhood is a matter which demands the serious attention of parents and the close consideration of physicians, for the reason that upon it may depend something more than a general appreciation of one of the most important factors of health. Of this growth we cannot judge or estimate from our knowledge of the same valuation in the case of the adult, for we must never cease to remember that in innumerable essentials there is a great difference between the constitution of a child and that of an adult. This is determined by the peculiarity of the conditions of infantile nutrition—the conditions of the action of health having dependence upon rest and nourishment, and requiring proper attention, lest the function of the nervous system becoming defective, abnormal innervation should lead to unnatural action of the principal organs. Moreover, a baby's life involves a greater consumption of nutriment, and consequently the process of assimilation fills a far more important position in its economy than in that of an adult, and is dependent upon the vigorous exercise of all the organs, and of the nervous system in particular. It is therefore easy to understand why young children are so apt to suffer from nutritive disorders; why death results from a lessening of the power of resistance; and why all infantile diseases are traceable to nutritive disorders. This difference between the adult and infantile constitutions manifests itself in the peculiar behavior of their weights—a grown person realizing no active

fluctuations, but a child not uncommonly gaining or losing from ten to twenty per cent. of its weight in a single week. So knowing the laws governing a child's growth it is ours to make this knowledge of service as a means toward the determination of disease.

My observations fix the average weight of a child at birth as about 3,251 grammes, or seven and one-fifth pounds. Hecker regards the average as 3,275 grammes; Quetelet as 3,200 grammes, Scanzoni as 3,437 grammes, and Siebold as 3,375 grammes. From personal and authoritative knowledge I am able to find $7\frac{1}{4}$ pounds the average weight of boys, and $7\frac{1}{20}$ pounds the average of girls at birth.

In the first year the average gain may be stated as 6,000 grammes, equivalent to about 3.31 ounces per week. This gain has no uniformity, as has been determined by weighing one hundred and eight children twice a day from birth onward. At first there is a loss of weight, and it is not until the ninth day that the child has regained its weight at birth. After the ninth day—the sixth according to Bouchaud, the fifth according to Hoffman—the equilibrium is re-established, and there is a gradual increase until the seventh week.

As to the infantile growth in height, I think the gains are slow at first, least during the middle of the year, and greatest from the tenth month.

Now, putting together the two facts that there is very little gain in the height or weight in early life, any one can readily understand why the greatest death-rate occurs within the first week or the first month. After its nine months of intra-uterine life the transfer to a new condition of existence is sudden, and nothing is more natural than a temporary disturbance of its general economy. In fact, the new-born child is still an embryo in regard to many of its organs, and especially of its nervous system. It loses weight not only because of the evacuation of meconium, loss of the umbilical cord, and drying of the skin, but also because of the new and unfavorable conditions of nourishment. The child, unlike the calf and pup, will not nurse as soon as born. It will not because it cannot assume full control of the muscles involved in the act of sucking. On an average the new-born

child takes scarcely an ounce of milk the first day, but six ounces on the second, fifteen on the third, and so on until at the end of the month thirty ounces is the least amount to average. It is evident, therefore, that the earliest nourishment is deficient, and what is more, the milk acts as a laxative, is not properly digested, and is not perfectly normal, as the mother's health is impaired by the phenomena of labor.

From this we must deduce that in the system of the newborn child the nutritive processes demand more than the insufficient food supply gives. In plain language, the child is in a state of starvation, liable to prove fatal from the exhaustion of the nervous system rather than from the absolute deficiency of nourishment primarily considered. The endurance of the starvation is in proportion to the resistance of the nervous system to the demands of functional activity. There is not a nerve but what is full of life, and the sudden transfer from darkness to light, from a higher to a lower temperature, means a stimulation of general nutrition. This we all recognize. A strong man will suffer tissue disintegration if transferred suddenly from darkness to light, from a temperature of 105° to one of 60° to 70° . If a man, how much a child!

Therefore, we may conclude that the life of the child for at least the first six weeks is characterized by super-nutrition, insufficient nourishment, and an asthenic nervous condition. It struggles every waking hour for existence, and, naturally enough, perishes of marasmus, bronchial, or gastrointestinal affections, all too frequently. Consequently our efforts are to be directed towards avoidance of cold, excess of light, and the lack of the proper sustentation of the tender forces.

After the sixth until the nineteenth week, the second and the best period of the first year of life ensues. All physicians and observant parents recognize this, and if we would explain it we need only refer to the facts that growth in weight and height is then most active, the general nutrition is in excellent condition, and special causes of disease are absent. If diseases occur they are due either to dietetic faults or to exposure. There is a gain of four or five ounces

a week in weight, and the amount of milk taken is about thirty ounces a day.

After the nineteenth week there follow three periods of depression of nutrition—the periods of dentition—occupying sixteen weeks in all, and shaping the child's economy. At this time (or these times, more properly), there is an increased tendency to local disorders, rather than disorders of nutrition. The tooth, approaching the mucous membrane, is an irritant, which manifests an irritation which acts directly as being transmitted to the nerve-centres, so that exposure to climatic influences, errors in diet, and infectious germs become so many decisive factors in disease. In the dentition periods the item of growth shows little if any gain, but in the inter-dentition periods there is an average gain of three or four ounces a week.

The conclusions which I would point out are that every child has its first year divided into five periods, viz.: (1) transition, (2) normal, and (3 to 5) dentition. In other words, it is at first weak, then it enjoys three months of normal life recuperative of its transition period and preparatory for that of dentition. Weight relates mainly to nutritive processes, and height concerns the energy of cellular life. Information derived from both show that a child's growth during the first year is not a process by itself, or governed by its own laws, but faithfully represents the child's well-being, and as such is well worth the attention of all who care for children as nominative of the special care required.

ART. III.—**Complications of Malarial Fever with other Diseases.** By JOSEPH JONES, M. D., Visiting Physician to Charity Hospital of New Orleans; Professor of Chemistry and Clinical Medicine Medical Department Tulane University of Louisiana, etc.

The poison of malaria, like that of syphilis, produces a condition of the human system characterized by certain lesions of the blood and other organs upon which may be engrafted various acute affections, as pleuritis, pneumonitis, and acute articular rheumatism, diarrhœa, and dysentery. Thus,

a careful analysis of the clinical record of 757 cases of disease treated in the Charity Hospital (October 1st, 1875, to April 1st, 1876; October 1st, 1876, to April 1st, 1877,) gives the following statistics with reference to uncomplicated and complicated cases of malarial fever:

<i>Diseases.</i>	<i>Cases.</i>	<i>Deaths.</i>
Intermittent fever.....	286	1
“ “ and pneumonia.....	5	...
“ “ and dysentery.....	2	...
“ “ and diarrhoea.....	14	2
“ “ and erysipelas.....	1	...
“ “ and organic disease of heart.....	1	...
“ “ and rheumatism.....	2	...
“ “ and epilepsy.....	1	...
“ “ and coma.....	2	1
“ “ and bronchitis.....	3	...
“ “ and anasarca.....	1	...
“ “ and necrosis of humerus.....	1	...
Remittent fever.....	37	...
“ “ and diarrhoea.....	1	...
“ “ and malarial hæmaturia.....	1	1
Pernicious malarial fever.....	2	2
Remittent fever and lead poisoning.....	1	...
Malarial fever.....	3	...
Malarial coma.....	1	1
Congestive chill.....	1	1
Malarial cachexia.....	2	...
Chronic malarial poisoning.....	29	2

In the preceding 384 cases of malarious diseases with various complications, eleven proved fatal. Of this number, uncomplicated intermittent and remittent fever occurred in 325, with one death; the remaining sixty-one cases, complicated with intercurrent diseases, occasioned ten deaths. The various complications, therefore, greatly increased the otherwise slight mortality of malarial fever.

It is worthy of note that chronic interstitial hepatitis, terminating in cirrhosis of the liver, ascites, and death, frequently results from the prolonged action of the malarial poison, as may be illustrated by the following case:

Case of Cirrhosis of Liver, caused by the prolonged action of Malarial Poison—Ascites—Abdomen Tapped—Two gallons and one quart of serous liquid drawn off—Supervention of Hospital Gangrene of Walls of Abdomen in neighborhood of the Wound—Death.—James Lewis, age 42, native of Louisiana, farmer, father of large family, temperate habits, entered ward 15,

bed 197, Charity Hospital, December 8th, 1882. Patient stated that he had resided and cultivated a farm on Pointe Coupee, Louisiana, and was attacked with severe malarial fever in the month of August, 1882, has had frequent paroxysms, and has never had any relief from the fever and its effects during the past four months. As the disease progressed, the patient discovered that his abdomen began to swell, and he attributed this to the frequent doses of calomel and quinine which he had taken during the progress of his disease.

Condition at time of admission into Charity Hospital.—Pale, sallow, pinched features; upper extremities emaciated; abdomen distended with liquid (rendered evident by palpation); veins of abdomen enlarged and filled with dark venous blood, presenting an arborescent appearance; lower extremities œdematous; diaphragm pressed upwards by liquid accumulated in the abdomen; lungs compressed; respiration difficult, and greatly disturbed upon the slightest exertion. Heart pushed upwards, the apex beat being between the fourth and fifth ribs; anæmic murmur heard with second sound of heart; spleen enlarged. Careful examination indicates that the *liver* is hardened and reduced in size. Urine contains some albumen.

Diagnosis.—*Cirrhosis of liver*, resulting from the action of malaria, and complicated with the results of malarial poisoning.

Purgatives and diuretics, with iron and quinine, produced some temporary relief, but after the full and faithful trial of these measures for the relief of the ascites, it was deemed necessary to draw off the liquid by mechanical means.

It is worthy of note that during the most favorable action of the purgatives and diuretics, the albumen disappeared from the urine, and its presence was clearly referable to the obstruction of the circulation and functions of the kidneys from the mechanical pressure of the liquid effused into the abdominal cavity.

On the 25th of January, 1883, I introduced the trocar and canula (tapped paracentesis abdominalis) into the abdominal cavity at a point midway between the umbilicus and the superior-spinous process of the ilium, and drew off eighteen pints (two gallons and one quart) of serous liquid.

The patient expressed great relief from the evacuation of the fluid, but on the second day after the operation the lips of the wound became swollen, with a red erysipelatous blush on the adjoining abdominal surface.

The inflammatory action spread rapidly, the parts immediately around the area assumed a blue livid look, the swelling increased, the blue line steadily advanced over the abdominal walls, having an ash-colored stinking slough in the centre. The pulse became rapid and feeble, and the patient died February 2d, 1883.

Correspondence.

Notes on a Visit to Monsieur Pasteur.

Mr. Editor,—While in Paris in July I visited M. Pasteur's clinic to see, for my own satisfaction, the process of his inoculations, and—thanks to his kindness—I was permitted to study the entire process, not only of the inoculation of the person, but his method of inoculating the rabbits, preparing the fluid with which the individuals are inoculated, and visiting and viewing the rabbits in the different stages of rabies. Since receiving the support of the French Government (\$5,000 per annum), he has removed his clinic to Rue Vanguelin, while his laboratory is still at Rue d'Ulm, both in the well-known Latin quarters.

Mon. Pasteur is, as you probably know, a man in the neighborhood of fifty years old, inclined to stoutness like most Frenchmen, about medium height, is slightly lame from a previous palsy, and has a very soothing, gentle voice, and kind, benevolent face.

His clinic is held a 11 o'clock A. M., at which time every patient is expected to be in the reception-room, which is a large room leading into a quiet, small registry-room, where names and histories of the cases are recorded. Then we came into the operating-room; and here is a central space railed off, so that the operator may not be interfered with by crowding curiosity. On a table near at hand are about twelve vials, each containing a fluid of light yellow hue, translucent, somewhat more dense than water. These glasses or vials are covered over with paper; also there is a can of hot water for cleansing the *hypodermic needles* after an inoc-

ulation has been made. The fluids in these vials are of various strengths, as will be seen later on, when I mention the process of preparing this fluid.

The patient is brought forward, the abdominal wall is exposed, and a hypodermic syringe is filled with the fluid of the proper strength for the case treated, and this is injected in the cellular tissue. The abdominal region is selected for the inoculation *solely because* the tissue is more lax in this position, and the injection can therefore be easily made. I was assured that in no case yet had *abscess followed the use of the hypodermic needle*. Very rarely are any unpleasant symptoms experienced after these inoculations (or injections), and then only a general malaise, which lasts but a short time. In the ordinary cases, such as dog-bites upon the hands or legs, one inoculation daily for twelve successive days is the rule. But if the bites are numerous, and upon the face, they will receive two inoculations daily at first, and in extreme cases three each day. In a small room opening from the operating-room, the wounds (or bites) are examined and treated locally.

I will describe the general appearance only of these wounds, and not specify cases: These wounds, when not cicatrized, resemble specific ulcers,—especially is this so upon the extremities. Iodoform powder is dusted upon them and, if required, the application of argenti nitratis is made. They are then wrapped with prepared lint, covered with oil silk, and bound with a very light bandage.

The first morning I was at his clinic, M. Pasteur had about fifty to sixty patients, of various nationalities. These were Germans, Italians, English, Russians, and two Belgians, but the majority were French. Before leaving I was invited to visit the laboratory, at 2 o'clock, and see the preparation of the fluid.

But I will first describe the inoculation of the rabbit, which produces rabies, succeeded by death, after which the spinal cord and brain is taken away, and from which the fluid for human inoculation is prepared. This operation is very rapidly and skilfully performed. The rabbit to be inoculated, after being secured to a table, is then chloroformed,

previously having the hair cut away from the frontal region. After becoming fully anæsthetized, an incision about one inch and a half long is made along the median line over the frontal bone. The bone is then entirely exposed and trephined, a circular button of bone about four lines in diameter is removed, the dura mater exposed and picked up, and about two to three drops of the fluid (or virus), quite fresh (not more than four days old), from a rabid animal (generally a rabbit), is injected within the sac of the dura mater thus exposed. The parts are then bathed with a solution of earbolized water, and the skin drawn together by two sutures. A rabbit thus inoculated will have a period of incubation (*i. e.*, before the symptoms of rabies appear) of $6\frac{1}{2}$ to 7 days, and will then show symptoms of spinal irritation in paroxysmal contractions of the muscular system, which is followed by paralysis, and death, about the fourth day after the first symptoms occur. This course scarcely varies. Death ensues in the inoculated rabbit on the eleventh day, after the inoculation, from the virus (or spinal-cord fluid) of a recently rabid animal; and then within a reasonable time after death the spinal cord and brain is removed. There is always much congestion of the cord and brain, and not infrequently extravasations of blood are found. After removal, the cord and brain are exposed to the action of crude potash, which extracts the fluid by affinity. This vial, containing brain, cord, and potassa, is dated; and whenever any fluid is desired it can be readily poured out. For the first inoculation a patient receives, the fluid is taken from a bottle in which the brain and cord have remained for fourteen (14) days. The second inoculation the fluid will be thirteen (13) days prepared; and in this ratio are the inoculations made, except that no case is inoculated with the fluid unless it has been *prepared at least four (4) days*.

The principle involved is this: A patient becomes habituated to the inoculations, as they successively occur; and, therefore, as the number of inoculations increase, so also does the strength of the fluid used. Mon. Pasteur does not advise its use earlier than the fourth day of its preparation, because he finds in the lower animals, if used before this time, it will produce rabies or true hydrophobia.

I leave the readers of this article, which is mainly descriptive, to form their own opinion as to the virtue of this treatment; and I would merely say, as may be discovered from this history, that the treatment is founded upon scientific investigation by M. Pasteur.

The results thus far have been twelve deaths from over 1,600 patients treated. Six of these were caused by wolf-bites, five by cat-bites, and only one from the bite of a rabid dog. The last-mentioned case was frequently commented on by the Paris press, and the true story seems to be as follows: A man by the name of Bonvier was bitten by a mad dog, and soon after presented himself for treatment. He was a hard drinker, and had his sprees frequently. He had one or more during his treatment, which it is claimed was irregular, because Bonvier did not present himself at the time required; and after leaving Paris he is said to have kept up his drinking habits, and died of pronounced hydrophobia this month.

In conclusion I would say, Paris contains a great many of the canine species. At every hotel and private house you find several. There is no law that compels owners to muzzle their dogs during the heated seasons, and therefore very few are muzzled; hence there is great need of some really specific treatment for hydrophobia in such a city exposed to conditions that produce rabies.

PHILLIP TAYLOR, M. D.,
(of 718 E. Franklin St., Richmond, Va.)

Paris, July 28, 1886.

Professional Etiquette.

Mr. Editor,—The observance of artificial rules in the social intercourse between man and man has now become universally recognized as one of the necessities of civilized life. Our daily existence is but one of continued routine of formality, regarded as essential to the character of gentlemen, and a neglect of which involves a forfeiture of social position. Beneath the glossy mask of modern politeness the savage

instincts of the natural man lurk, and the passions of the greatest of animals is only held in check by the courtesies and refinements of society. Built upon the great principles of morality and justice, taught by conscience and revelation, the rules of politeness and the observance of good manners are binding on man, both in his moral and religious aspect, and the elaborate details of Chesterfield's manual are included in the simple but comprehensive language of the *Golden Rule*.

Medical etiquette, as it is called by the profession and the public, founded upon the broad principles which govern mankind in other departments of life, demands from every member of our profession a conscientious and implicit observance. In pursuing a profession or trade depending so much on personal qualities—"an art imperfect from the necessities of the case, and ever allowing, indeed encouraging differences of opinion and of practice, it is any easy matter to find grounds of dispute and causes of offense;" upon the morbid brain of the invalid, a cast of the eye, a shrug of the shoulder will produce the effect of the most elaborate insult. The foibles of human nature, exaggerated by disease, are only too prone to seize upon every opportunity to indulge themselves; hence the common forms of politeness have been thrown most stringently around the profession of medicine—"not that its votaries require a stricter rule, but because the temptations to offend are so constantly presented, and so easy of execution."

A careful observance of these rules—however irksome, and many times in particular instances absurd, they may appear to be—is the bounden duty of every member of the profession. These things will not make a vulgar man a gentleman, nor will the law stifle rascality, but the yoke which sits easily upon true-hearted and honest men will dreadfully gall the stiff-necked quack who longs to escape from its influence. In the struggle to gratify this secret intrigue without violating the etiquette of the profession, the claws of the tiger will at last be discovered and inevitably receive the indignation and frown of his brethren and the public. This may seem unfair to those just started out,

as it may bar opportunity for making friends and reputation, and there may be sore temptations to spurn these old and conservative customs, whose usefulness all must acknowledge, and give full rein to the impatient desires for a brilliant and profitable career, and the attempt may be fatally made to "make a law unto himself." To all such I would urge the importance of following the path of rectitude and duty, and of carefully observing all the rules of professional etiquette. Many reckless, and it may be noble brethren, may have erred; if so, the only safety lies in a return to these observances.

GEORGE E. MATTHEWS, M. D.

Ringwood, N. C., Aug. 6th, 1886.

**Fatty Placenta Causing Abortive Hæmorrhage—
Treatment.**

Mr. Editor,—Mrs. H., aged thirty years, married seven years, has had six to seven miscarriages, generally happening from three to five months, beginning about the second month with hæmorrhage, which returned every few days until foetus was expelled. She had a miscarriage about fifteen months ago, at which I attended. Remembering the case, (as reported in a medical journal) of miscarriage being due to fatty placenta, and that muriated tincture of iron and chlorate of potash had been used successfully in the succeeding pregnancy, I examined the placenta and found it almost a mass of fat. At the beginning of her next pregnancy I gave the following mixture almost daily until she was delivered of a healthy male child at full term, and she had only a slight show of hæmorrhage, which was about the third month.

Tr. ferri chl	ʒiij.
Potass chlor.....	ʒiij.
Glycerini.....	ʒj.
Aquæ.....	ʒv.

M. S. Teaspoonful *ter die*.

W. J. STROTHER, M. D.

Culpeper, Va., July 27th, 1886.

Drainage in Ascites—Question of Authorship.

Mr. Editor,—Permit me, as one of the gentlemen whose generosity shall “let him who has won it bear the palm,” to whom you refer in your editorial “Permanent Drainage in Ascites—Authorship,” enter a most unqualified protest against the very indirectly implied charge of plagiarism which it contains.

That the article of Dr. Taylor, in the May, 1885, number of the *Virginia Medical Monthly*, should have escaped me is but natural, for the journals which are taken by me contain no mention of it. Granting that they did contain such a notice, or that I should, at the time, have read the original paper, I fail to see wherein lies the justness of the charge, for my first case, as you will see by reference to the reprint of my article, occurred on *August 2d*, 1880, at which time the notes were made. Dr. Stewart Harrison, of Anacostia, D. C., will corroborate my statements, having assisted at the first operation.

Dr. Taylor reported his case as being subjected to a similar treatment in the *Virginia Medical Monthly* for May, 1885, as follows: “Several months ago a patient who was supposed to be suffering with ovarian dropsy was placed under our care.”

Dr. Cailli reported his cases, the first one treated about four years ago, in the *New York Medical Journal*, Vol. XLIII., p. 232, 1886.

The question of priority of operation according to the record presented should be accorded to me; the priority of authorship to Dr. Taylor.

Now, in the *Medical Record*, Vol. XXX., p. 125, 1886, there is an abstract of a translation of an article, “The Open Treatment of Abdominal Tumors with Fluid Contents,” by Dr. Peàn, (*Gazette des Hopitaux*, No. 33, 1886,) where we find: “In the last twenty-one years the writer has performed this operation fifty-seven times, and his experience had led him to regard it as the safest method of treatment for such fluid tumors as cannot be extirpated, and far preferable to the simple tapping and drainage.” The operation

referred to is to make a free incision in the skin, draw out as far as possible the sac of the tumor, secure it to the opening, incise, empty, and disinfect it, then introduce a drainage tube. Who has the priority of operation—Taylor, Cailli, Eliot, or Peàn? I favor Peàn, and waive all claims to the first place.

I am, very truly yours,

LLEWELLYN ELIOT, M. D.

510 *E street, N. W., Washington, D. C.,*

August 7th, 1886.

[We very cheerfully give place to this letter of explanation. But we think our correspondent will agree with us that the credit of authorship for the operation, by the rules usually followed in awarding authorship, still belongs to Dr. Hugh M. Taylor, of Richmond, Va. At the time he published, he was not aware that any other had attempted or thought of the plan of treatment, and it seems from the letter of Dr. Eliot that no one is prior to him in publishing the suggestion so as to let others profit by it. But we are sorry Dr. Eliot interprets the meaning of our August editorial as implying plagiarism either on his part or on the part of Dr. Cailli. We disclaim any such meaning or thought. We intended simply to set forth the claim of Dr. Taylor as the rightful claimant of authorship.

We intend nothing personal in remarking that this is only one of many instances in which the rights of authorship by Southern practitioners has been overlooked, simply because of the want of patronage of Southern journals by the mass of the profession in the North. We have become accustomed to submit, and probably we would not have specialized this instance in our August number had we not been personally so well acquainted with the facts. Dr. Taylor is a comparatively young surgeon, and his modesty perhaps would prevent him from defending his own claims. But his merits and development in the profession are such that we predict it will not be many years before the association of another's name with his in the line of surgical study will be an appreciated compliment.—EDITOR.]

A Needle Swallowed Removed from Arm.

Mr. Editor,—To-day a negro man, aged 30, with fine muscular development and every evidence of robust health, complained of pain in his left arm, which he first noticed two days ago. This morning he was unable to continue his work (that of brick-laying) on account of the pain incurred when the muscles of the arm were exercised. An examination revealed a hard substance imbedded in the biceps about midway between the shoulder and the elbow. The offending object was long and pointed, and, presenting obliquely across the body of the muscle, one end was forced up. An incision was made and a needle one inch and a quarter long was extracted, which gave evidence of having been in its unnatural encasement for some time, it being oxidized and the point blunted. He disclaimed having had a needle stuck in him by accident or otherwise, but said he had often swallowed pins for the edification of his sable associates, and some months ago he swallowed a needle. He did not recollect having suffered any special pain or inconvenience from its being in the stomach or during its migratory movements *en route* to the point of its extraction.

I am unable to understand how this hard, long substance, with its sharp cutting point, could have passed from the stomach into the body of the biceps, from which it was extracted, without causing inconvenience during its long and necessarily circuitous travel.

ARCH. CHEATHAM.

Henderson, N. C., July 21st, 1886.

A FLORIDA physician the other day conceived the impression that some one was peeping through the key-hole of his office door. He investigated with a syringe of pepper sauce. In about half an hour afterwards he found his wife with her left eye covered with a bandage, so great was the pain of an injury which she had received from a chip which flew up and hit the organ, while she was splitting kindling wood.—*N. E. Monthly*.

Original Translations

Rupture of Uterus During Pregnancy—Porro's Operation—Cure. Translated by ROBERT T. WILSON, M. D., Assistant Surgeon to the Hospital for the Women of Maryland, Baltimore, etc., and CARA S. ARVEY, A. R. C. P., England.

This translation is from an extract in the *Annals of Gynecology*, Feb., 1886, of a communication by Prof. Slaujansky, made to the Chirurgical Society of Russia, at St. Petersburg, November 23d, 1885.

“Porro's operation” (or amputation of the uterus and ovaries), was first performed by Prof. Porro, at Pavia, 1876. Since then, reports of 175 cases have been collected. Porro advised this new operation as a substitute for Cæsarean section. Subsequent authors made it embrace all operations which aim at the simultaneous removal of the uterus and its appendages. This more general definition embraces a number of operations, having for their foundation the same pathological changes and indications of treatment. The pathological condition requiring the operation is rupture of the gravid uterus, the contents of which are poured out more or less completely in the peritoneal cavity.

Laparotomy having now been performed frequently on the death of the fœtus, it has been found that, in some cases, utero-ovarian amputation was indicated (laparo-hystero-oöphorectomia uteri gravidæ ruptæ). Godson,* however, has noted only seven cases of this kind. Halbertsma† had another, in which case the demand for surgical intervention arose on account of rupture of the uterus. But this latter case ought not to be ranked among the class we are now considering because (1) the uterine rupture was incomplete, and the contents of the organ did not pass into the peritoneal cavity; and (2) because Halbertsma, in order to extract the fœtus, had to make an incision in the uterus opposite the rupture. I have tabulated all of Godson's cases of Porro's operation as follows:

**British Med. Jour.*, 1884 and 1885.

†*Centralblatt für Gynäkolog.*, p. 67, 1881.

TABLE OF LAPAROTOMIES WITH CONSECUTIVE AMPUTATION OF THE RUPTURED UTERUS, AND OVARIES.
FROM GODSON (*British Medical Journal*, 1884, 1, AND 1885, 1).

	THE YEAR, MONTH AND DATE OF OPERA- TION.	OPERATOR.	HOSPITAL OR PRI- VATE HOUSE.	AGE.	NUMBER OF AC- COUCHMENTS.	TIME OF OPERATION AFTER RUPTURE.	STATE [CONDITION] OF THE PATIENT.	ISSUES.		CAUSE OF DEATH OF THE MOTHER.	METHOD ADOPTED FOR THE TREAT- MENT OF THE PEDICLE.	DRESSING.	LENGTH OF TIME OF OPERATION.	WHEN REPORTED, ETC.
								FOR MOTHER.	FOR CHILD.					
1	1878 Nov. 2d.	Prévoſt (Moscow, Russia).	Hospital.	23	4	10 hours.	Peritonitis incipiens.	Died five days after operation.		Repeated hemor- rhage of the pedicle.	Extra-peri- t. Serre-noeud	Lister.	45 min.	Amer. Jour. Obstet., 1885, to Harris.
2	1880 Feb. 11th.	Säxinger (Lübbin- gen).	Clinique.	20	1	6 hours.	Tympanitis uteri; weak.	Died 33 hrs after operation.		Collapse uterine and vaginal gangrene.	Extra-peri- t. Serre-noeud	Lister. spray.	70 min.	Communi- cated to Godson.
3	1881 Mar. 14th.	Pasquali (Rome).	Clinique.	38	3	Two days in labor; time of rupture not indicat- ed.	Favorable.	Died 24 hrs after operation.		Septicæmia.	Intra-peri- t.	Lister without Drain- age.	1 hour.	Annali di Obst. di mi- lano 1881, Vol. III.
4	April 2d.	F. Foruſari (Ascoli, Piceno).	Private House.	27		12 hours in labor; time of rupture not indicat- ed.	Unfavor- able.	Died 51 hrs after operation.		Peritonitis.	Intra-peri- t.	"	1½ h.	Raccogli- tore medico di Forlì, 1881, Vol. XV.
5	1882 Mar. 21st.	Marchand (Paris).	Hospital.	26	3	1½ hour.	Very bad.	Died the same day.		Peritonitis.	Extra-peri- t. Écraseur.	"	45 min.	Personal communi- cations to Godson.
6	Nov. 2d.	Gri g (Landre).	Hospital.	25	2	22 hours.	Collapse.	Died 51 hrs after operation.		Collapse.	Extra-peri- t. Serre-noeud	"	2¾ h.	Raccogli- tore medico di Forlì, 1883, Vol. XX.
7	1883 Dec. 18th.	Violani (Forlì, Italy).	Private House.	27	3	12 hours.	Collapse.	Died 48 hrs after operation.		Peritonitis septica.	Extra-peri- t. Serre-noeud	Lister incom- plete.	40 min.	

From this table we see that the result has always been fatal to the mother; the children were dead before the operations were begun.

The case which interests us to-day, however, by its favorable issue, justifies a high appreciation of Porro's operation: On October 5th, 1885, about 6 P. M., Catherine Efdokimof, age 37, wife of a laborer, in her ninth pregnancy, a week before full term, while crossing a street of Vassili-Ostroff, was knocked down on the rails by a wagon of the 2d Company of Tramways. She fell on the left side of her abdomen, and was run over by the wagon. Copious hæmorrhage occurred from her genitals, and during her transportation home she lost consciousness, but this soon returned. She was not seen by a doctor (Dr. Smolski) until 2 P. M., October 6th, who, recognizing the seriousness of her condition, advised her removal to the Clinique of the Imperial Academy of Medicine.

When examined at the Clinique about 8 P. M., the following facts were noted: A very strong woman, of medium height, rather fat and well developed; surface pale, with a cyanotic appearance, and having a mucousy discharge from the vagina. She was perfectly conscious, but her features were pinched. Blotches of ecchymoses were noticed on the inner half of the left eye brow, and lower part of her abdomen, especially on the left side. No injury to the chest; stomach very tender; temperature 100.4° F.; pulse 138. After consultation with Prof. Bider, because of the gravity of the condition, we decided on an exploratory incision under chloroform. The enlarged abdomen had very thin walls. On palpation, the occipital fontanelle of the fœtus was recognized somewhat below and towards the left of the pit of the stomach. Tracing the suture, a little to the right the body of the fœtus was felt. The fœtus was motionless, and its heart sounds could not be heard. Vaginal examination showed that the os was not dilated but dilatable, and permitted the introduction of two fingers. On entering the uterine cavity, the edge of the placenta was felt attached to the right uterine wall; but on feeling for the left uterine wall, none was found. Bimanual manipulation revealed that nothing but the abdominal wall separated the examining fingers. Proceeding further and higher with the hand in the vagina, it met with the fœtal foot. Between the foot and the exploring fingers were the fœtal membranes; but in no direction could the limits of the uterine rupture be defined.

But all of these facts did not assure us positively that we

had to deal with a complete rupture of the uterus with the passage of the fœtus into the abdominal cavity. For it is plain that in many cases extreme thinness of the abdominal and uterine walls can, on palpation, allow of results absolutely similar to those we here experienced or saw. The history of the patient, the probability of a traumatic lesion, the abundant hæmorrhage from the genital parts as the immediate effect of the fall, the loss of consciousness and the phenomenal collapse—these, added to the information obtained by the objective examination, furnished strong proof in favor of uterine rupture. But was the rupture complete or incomplete? This point of diagnosis was not yet fixed. To sum up, our diagnosis was: Traumatic rupture of the gravid uterus.

As to the exact position of the fœtus, did it pass entirely into the abdominal cavity or did it remain in the sub-peritoneal region? Such questions could only be decided in the course of the obstetrical procedure. In any event, the circumstances called for energetic and immediate treatment, and showed that accouchement must be aided by art. This might be accomplished in two ways—by version or by Cæsarean section. The first mode was very tempting, because it was easy to reach the foot of the fœtus. It was only necessary to break the membranes and we could perform version, which appeared the easier because of the mobility of the fœtus. But considering, on the other hand, that we did not know even approximately the anatomical extent of the uterine rupture; that we were, besides, absolutely ignorant of the possible lesions that might have taken place at the moment of the accident, we could not give the preference to this method. Besides, we apprehended the entrance of air into the uterus, if we broke through the membranes—perhaps even into the peritoneal cavity, thus causing a condition favorable to infection. The second mode of interference—extraction of the fœtus by laparotomy—was more clearly indicated by the probabilities that the uterine rupture was complete, and that the child had passed entirely into the abdominal cavity. Nevertheless, if we had been sure that the uterine rupture was incomplete, and that the fœtus rested below the peritoneum, delivery by version would have been the preferable plan.

Because of the want of clearness in the indications, which made it impossible to obtain a precise diagnosis, we decided to make an exploratory laparotomy. Thanks to the remarkable thinness of the abdominal wall, it was only nec-

essary to make a very small incision. It was also enough to incise the peritoneum only one-half inch or so immediately above the foetal head; for certainly it might be possible for it to assist itself, small as it was, through this incision, if the foetal head was free in the abdominal cavity, or if, on the contrary, it was separated by a layer of tissue. This abdominal incision, performed with thorough antiseptic precautions, does not appear to exercise a notable influence on the general state of the patient.

After having made the exploratory incision and ascertained that the foetus had passed into the abdominal cavity, laparotomy was performed; the continuation of the operation depended on certain conditions. If, contrary to what did take place, we had ascertained that the foetus rested below the peritoneal lining, we would immediately have closed the abdominal incision by sutures, after which we would, by aid of version, have performed version and extraction.

At 11 P. M. the patient was transferred to the clinical ward, which is used for operations which must be performed during the night. This room is provided with a Siemen's gas apparatus, which furnishes a strong light, quite sufficient to permit of these urgent operations. Professors Bider and Smolski, Doctors Ficher, Matveef, Rounge, Makovetsky, and two midwives of the Clinique assisted at the operation. Dr. Ficher acted as first assistant. The patient was chloroformed by Dr. Matveef. At the beginning of the operation the temperature was 100.4°; pulse, 138; respiration, 25.

The operation was performed with the most minute antiseptic precautions. Incision, following the linea alba, for two centimètres ($\frac{3}{4}$ inch). The opening in the peritoneum, of about two millimètres ($\frac{1}{4}$ inch), was immediately above the foetal head. A mixed liquid, composed of water and blood, of meconium and flakes of cheesy substance, escaped through the opening. One could plainly see through the incision the hair and skin of the foetal head which was situated in the abdominal cavity. The abdominal wall and the peritoneum were then incised with scissors, about twelve centimètres (3 inches); then the foetus, seized by the head, was gently drawn out. The umbilical cord was detached. Introducing the hand into the peritoneal cavity with the object of extracting the after-birth, we ascertained that this organ was still strongly adherent, and, besides, it appeared to adhere to the external surface of the uterus. I believed then that it was preferable to remove the uterus through the abdominal wound than to attempt the cutting off of the

placenta under such doubtful circumstances. This taking away of the uterus, including the placenta, was very easy, and I then had the state of things before me which was unknown to me until that moment. The uterus, torn from one side to the other, in its superior third, was completely turned over in such a way that its internal surface had become external (*eversio uteri intra peritonealis*). The placenta and the membranes were absolutely adherent on all sides. The internal os uteri was hidden by the membranes, which covered it like a bridge. This disposition gave to the uterus the aspect of a champignon (fungoid excrescence), under the top or cap of which we could discover the Fallopian tubes. Because of the grave complication in this state of the uterus, knowing well what hæmorrhage might take place from the detachment of the placenta adherent to an everted uterus, I resolved to apply an elastic ligature around the uterine neck, so as to leave the two ovaries above the ligature. After having, by elastic ligature, prevented danger of hæmorrhage, we cut off the placenta and the fœtal membranes. That effected, the uterine eversion, with the champignon form given to the uterus, was very apparent. As the replacement of the uterus was difficult, if not impossible, I resolved to cut it off with its annexæ. I was glad that the operation was performed quickly, as the patient stood the ehloroform very badly. To assure myself against a loss of blood, I applied a second elastic ligature, which secured the neck of the uterus more firmly than the first. Finally, to avoid risk of a secondary hæmorrhage, I put on the pedicle, divided into two segments, two elastic ligatures. This done, the uterus and the ovaries were cut off with a few strokes of the knife. We had then a pedicle of smaller size than that of pedicles obtained in certain cases of laparo myotomies. But, proceeding to the minute examination of the peritoneum, we discovered a general peritonitis. The intestinal canal was intensely vascular, and the surface was like velvet. Hurried by the state of the patient, for the treatment of the pedicle I adopted the extra-peritoneal method. The abdominal wound was closed by nine deep silk sutures—eight sutures for the superior part of the wound, one for the deep part. These sutures also fixed the pedicle in the abdominal wound. I rejected needle fixtures and clamps of all kinds, being confident that the firmness of the pedicle was assured by the sutures in question and the two elastic ligatures which were applied outside the wound. The surface of the wound and the extra-peritoneal part of the pedicle were freely

sprinkled with iodoform. Two layers of iodoform gauze, a small piece of sublimated cotton, and an abdominal bandage constituted the entire treatment. The operation lasted forty-five minutes. The patient was transferred to an isolated room. Returning to consciousness, she declared that she felt better, and that the pains she had previously felt in the abdomen were all gone.

The fœtus, dead before its extraction, was a female, and well developed; length, about one foot; weight, 2,850 grammes (11 lbs). Placenta very much softened. The largest mass of ovoid form, measured twenty centimètres (nearly 5 inches) in width. The dimensions of the other part were: length, eight centimètres ($1\frac{3}{4}$ inches); width, twelve centimètres ($2\frac{3}{4}$ inches). Structure, normal. The total mass weighed 582 grammes (2 lbs. odd). No pathological alterations were appreciable in the uterine tissue; the edges of the wound appeared freely cut and from them much sanguinary effusion of different consistency and thickness. The tubes and ovaries appeared normal. The uterus and annexæ weighed 468 grammes. It was unreasonable to expect her convalescence with no fever. Besides, the presence of numerous ecchymoses upon the tegument made us suspect the existence of very deep lesions.

If we consider the different phases of the case, carefully recorded by my assistant, Dr. Makovetsky, we see that the healing process took place systematically. In every part where we had a right to expect union by first intention it occurred. The stitches were taken away the fourteenth day, except the two which were placed above and below the pedicle. These were removed the twentieth day. That part of the pedicle situated above the elastic ligature commenced to slough away from the first day; at the commencement of the second week after the operation it presented a hard ligneous appearance. The secretion of the part of the wound situated below the pedicle began to supurate early. The process of separation of the decayed part of the pedicle proceeded regularly falling off on the twenty-third day after a granular surface, about the size of a gold piece of 10 francs. This surface has the appearance of a second navel.

To sum up, the woman is now well; there is no scar like that following some laparo-myomotomies in which the extra-peritoneal method of treating the pedicle is adopted. The vaginal portion of the uterus was very small, and situated very high, and was fixed to the abdominal wall. The vagi-

nal cul-de-sacs are free; on no part is there any pathological swelling. The complications after the operation, which brought on some feverish phenomena, consisted in an intestinal disorder. This developed on the 11th of October (five days after the operation) by profuse diarrhœa, persisting for four days. Temperature rose to $39^{\circ},1$ [$103^{\circ} + ^{\circ}\text{F.}$]; pulse 26. On the third day after the operation, albuminuria was found, and occasionally a very large number of red and white globules. This nephritic affection disappeared about the twentieth day. From this time an excoriation about the coccyx was noticed, attended by swelling on each side. The swelling resulted in an abscess, which opened spontaneously in the region of the excoriation, November 11th, or thirty-five days after the operation. For the first time since the operation, the temperature became normal. During the progress of the case, the pulse was absolutely parallel to that of the temperature. Never was there any sign of septicæmia.

This case gives great interest to the following questions: In case of uterine rupture, must one, with a view of extracting the fœtus, practice laparotomy or version? This question has been studied for uterine rupture occurring unexpectedly in the case of labor. Laparotomy has been done, in the last century, under similar circumstances by French surgeons. After Deneux,* the first surgeons who practiced it were Thibaut-Desbois, of Orleans (1775), and in Russia it was advised in 1787 by Professor Maximovitch-Ambodie for cases of complete uterine rupture, with the passage of the fœtus into the abdominal cavity. In the last half of this century, under the double influence of American statistics (Trask), and from brilliant successes obtained in abdominal surgery, the majority of authors give preference to laparotomy in cases of "uterine rupture taking place during accouchement." This opinion is equally admitted in Germany, and we see that in the first edition of the treatise on Labor, Prof. Schröder mentioned laparotomy as the only method applicable in the case of uterine rupture with the passage of the fœtus into the abdominal cavity. But in the last edition of this treatise, Schröder* is no longer an advocate of laparotomy, but advises version. Doubtless the success which in these latter days has followed operations performed by natural means, and completed by the practice of drainage of the wound, has caused this change of opinion. The fact

* *Essai sur la Rupture de la Matrice pendant la Grossesse et l'Accouchement*,—*Th. de Paris*, 1804.

* *Voir les Cas Cites par Schæder, Loc. cit.*, p. 638.

that it was possible to modify this mode of procedure was taken from the researches of Bandl on mechanism and the seat of uterine rupture during labor. These researches have demonstrated that the uterus ruptures always at the lowest limit of its inferior distended and thinned segment, or at the level of the neck; besides, the rupture is nearly always transverse, and consequently its edges do not tend to come together rapidly. The result is, that the fœtus, thrown into the peritoneum, can easily be brought across this rupture, which preserves its primitive size, and be extracted by natural means. In such a case, if one were quite sure that at the moment the attempt to operate was made there was not already any infection, it would be right to think that, surrounding ourselves with antiseptic precautions, we should be safely guarding against a secondary infection.

Now, we must agree that accouchement by version is less likely to be accompanied by traumatism than laparotomy. These considerations only relate to cases of typical rupture, occurring during labor. Schrœder himself pronounces in favor of laparotomy in some exceptional cases, as, for example, to avoid an excessive hæmorrhage. He infers, again, from the works of Bandl that, even during labor (case of Simpson* and of Hoffmeier†), some ruptures occur whose extent and place are singularly unfavorable for the execution of version. And we must expect to meet with irregularities still more considerable when rupture has taken place during the last month of pregnancy, without contraction of the uterus. We have seen that, in the case to-day reported, the rupture occupied the body of the uterus. It was transversely inclined from top to bottom, from right to left, in the anterior wall of the organ. The opening was immense, and under the natural contractions the uterus was placed in a state of complete version.

To sum up, the uterus was turned inside out like the finger of a glove; the internal surface had become external, but kept very nearly its original size. The placenta and membranes were not detached from it. Schrœder thinks it not necessary, in cases of uterine rupture occurring during pregnancy, to have recourse to laparotomy. We cannot agree with him, if we can count our case, which, however, may be an exceptional one. Cases of uterine rupture during pregnancy are very rare. The pathological anatomy, and even the morphology of these lesions, have not yet been

* *Contributions to Obstetrics and Gynæcology*, 1880, p. 150.

† *Centralblatt für Gynäk*, 1881, p. 619.

well studied, and it is possible we may have met in our case conditions quite exceptional. It is easy to picture in what frightful situation we would have been in our case—both operator and subject—if we had performed version. This operation, however, as well as the extraction of the foetus, appeared to be the easier method. But attempts to cut off the placenta would have given rise to frightful hæmorrhage. The patient would have succumbed before the termination of the delivery. Also, in cases of rupture of the gravid uterus, when one ignores the exact situation of the lesion, and the accidental disposition of the organ, version could only be very hazardous: it is more reasonable to give the preference to laparotomy. This operation will permit us, besides, to complete objective examination without aggravating, in my opinion—contrary to the fear expressed by by some authors—the state of the patient.

The special interest in our case exists in the fact of the uterine eversion, which gives rise to the following points for consideration: 1st. The indefinite contour of the uterus, in direct relation with the state of eversion, by the presence of the placental plant on its internal surface, becoming external, rendered palpation insufficient. Hence we were obliged to apply the principles of abdominal surgery; consequently we made the abdominal incision, which alone permitted us to give a good account of what we have done. 2d. While anticipating the removal of the placenta and foetal membranes, uterine eversion prevented the possibility of a fatal hæmorrhage, and did not allow the entry of air into the peritoneal cavity, and with it infectious substances. We have seen that the foetal membranes extended, like a diaphragm, above the internal os, in such a way that it was absolutely impossible anything could penetrate from the vagina or the cervical canal into the peritoneum. Also this last (peritoneum) became accessible for infection only through laparotomy. I thought it important to remark on this point, because there exists an opinion that the peritoneum of some persons might with impunity be exposed to all kinds of infection. Keith,* for example, speaks thus: "It seems to be simply impossible to kill some women, be the putrid mass left in the pelvis what it may." A like supposition exists from errors of observation; some circumstance of great importance has probably escaped our colleague of Scotland. 3d. Uterine eversion was the true indication here for Porro's operation. Al-

* Keith, *Contribut. to the Surgical Treatment of Tumors of the Abdomen*, p. 19, 1885.

though until this day the statistics relative to utero-ovarian amputation have not established its superiority over the classical Cæsarean section, we may admit that in some particular cases it will be more apt to give results preferable to those we may expect from our operation where a torn uterus is left in the peritoneal cavity.

The impression left, at first sight, from the table presented at the beginning of this communication, raises ourself in our own appreciation; but it is not as if one reckoned from the column where the state of the patient is related; we see there that the prognostic was necessarily grave, except nevertheless for Case 3. In this particular case the conditions are shown in a favorable light. But we are ignorant as to what moment the rupture took place; and the hypothesis of the existence before the operation of a septic peritonitis cannot be overlooked.

An Anecdote with a Moral.

Sir Spencer Wells, at a medical banquet in England, told the following story of Braithwaite, founder of the famous *Retrospect* that bears his name. "I made his acquaintance in a curious way, and he taught me a lesson which I have never forgotten. One evening a farmer rode up to Mr. Marsden's, who was the nearest medical man, to beg him to go at once and see a girl who was very ill. Marsden was not at home, so I offered to go. The farmer hesitated; but he was very anxious; so he said, 'Well, lad, get on my horse, and I'll go on for our doctor, Mr. Braithwaite.' So I rode to a small farmhouse near Chappletown, and found a room full of people and a girl insensible on the bed. I remember having her clothes loosened, and opening a window, and when she began to shiver, trying to make her swallow a little brandy and water. Then Braithwaite arrived, and very soon took me into another room, after saying to her mother, 'Give her two teaspoonfuls more of that brandy and water.' But as soon as we were alone he said: 'It is very wrong to give her brandy and water; it is the first stage of some eruptive fever. But a teaspoonful won't make any difference, and it will show that I did not differ from you. If I had,' he said, with a kind of smile, 'perhaps they would not believe either of us.' There was something in this way of treating a junior—so much good feeling mixed up with so much knowledge of human nature—that I have, when consulting with juniors, followed Braithwaite's example."

Analyses, Selections, etc.

Diagnosis and Treatment of Writer's Cramp.

Dr. George W. Jacoby, Physician to the Class of Nervous Diseases of the German Dispensary of the City of New York, in the June number, 1886, *Journal of Nervous and Mental Diseases*, considers under this title all the affections described by Benedict under the generic name of "co-ordinatory occupation neurosis." The name "writer's cramp" is acknowledged as sufficient. The symptoms (for we really have only symptoms to deal with) may occur in any person obliged to make prolonged use of any group of muscles. The symptoms have received the names of the occupations followed; thus we read of writer's, draughtsman's, engraver's, telegraphist's, violinist's, pianist's, blacksmith's, tailor's, seamstress's, photographer's and ballet-dancer's cramps, etc. The movements in all these occupations are not produced by the contractions of any one muscle, but by the harmonious co-operation of several.

The symptoms may present themselves in various forms, of which "cramp" is only one. Benedict classified them under the headings of spastic, tremorous, and paralytic; and these seem to cover the symptoms observed. Exactly where the seat of the disease is in writer's cramp is a question which cannot at present be answered in a positive or dogmatic manner. The various possible sites have been accused of being implicated. Thus, Duchenne, Solly, Althaus and Erb suppose it to be of central origin, situated in either the supposed co-ordinating centres of the brain, or in the cervical part of the spinal cord; Reynolds, Zuradelli, Geigel, Haupt, Meyer, Poore, Beard, etc., believe it to be of peripheral origin, and due either to an affection of the motor or of the sensory nerves. The bulk of testimony goes to prove that the majority of cases are of peripheral origin. But it cannot be denied that many cases are of central origin, and that in many, also, writer's cramp is only an early symptom of some central affection of the nervous system, which might have been diagnosticated if sufficient care had been devoted to it. Hence the necessity of a careful examination of every case, and, if possible, of making a diagnosis which shall embrace more than the words "writer's cramp."

This necessity becomes the more apparent in the treat-

ment by massage; for to attain anything like good results, it is imperative to select our cases. The very first question we must propound to ourselves is, therefore, "Is the case peripheral or central?" If it is peripheral, what is the direct disorder? Are we dealing with a paresis or a paralysis of certain small muscles of the hand, or with a disordered state of nutrition of single muscles, by which means is produced a hyper-contraction of the muscle itself, or a relaxation of its opponents, and thereby an incoordination, or is it an early stage of peripheral neuritis? Particular attention must be paid to the action of each muscle separately, and also to the harmonious action of the various groups. For the latter purpose the writing itself must be studied. Painful points and indurations along the course of the nerves—in fact, in the entire arm—must also be sought after.

In examining the method of pen prehension, which should be done first, if the pen is grasped tightly, it is probable that one or more of the small muscles—the interossei, the abductor and opponens pollicis, the flexor brevis pollicis, and the extensor primi internodii—are incapacitated, and that the larger ones are being used as substitutes. If the forefinger rises or slips off the pen, a failure of action of the first dorsal interosseus is the cause. If the phalangeal angle of the thumb gives in, it is due to a disorder of the extensor primi internodii. The various movements of the fingers must next be watched—the up-and-down motion, the lateral movement of the hand, etc. According to Poore, inability to keep the hand upon the paper is due to a failure of the supinator longus.

A limitation in the length of lines or letters (to about $1\frac{1}{2}$ cm.) is generally due to a paralysis of the long extensors of the fingers, as thereby an inability to extend the first phalanx is produced. Inability to strike a loud note on the piano, or to hold the pen with the point of the fingers, is generally due to a paralysis of the long flexors, the first and second phalanges being found in permanent extension.

Abduction of the thumb, so that it falls in the palm of the hand, and prevents flexion of the fingers, is due to paralysis of the abductor longus pollicis and flexor brevis pollicis. An inability to touch the ends of the fingers with the thumb without flexing them in the second and third joints, denotes a paralysis of the abductor brevis and opponens pollicis.

Poore says: "In every case of impaired writing power

which I have seen, there has been evidence, more or less marked, of derangement of one or more of the muscles used in writing;" and furthermore says: "The writer's cramp of text-books, in which failure of writing is the sole symptom, I have never seen." Dr. Jacoby corroborates both of these statements; all cases, whether of writer's cramp or other artisans' cramp which he has seen, have, upon careful examination, presented evidence of peripheral disturbance sufficient to account for the failure of their work. Furthermore, the cramp was in none of them the primary and sole disturbance; and all of his patients were not only unable to perform their own special work, but were also unable to execute other work which entailed similar use of the affected muscles. It is not essential that this peripheral disorder be dependent upon a paralysis or a paresis; but it may, in very many cases, be due to a faulty innervation of single muscles or groups of muscles, which causes either a failure in their action while the other muscles still exert their functions normally, or causes them to enter into a state of tonic contraction whenever an unusual amount of work is required of them.

The electrical examination will also, in many cases, show a difference in the reaction from that of the corresponding muscles of the sound hand—either an increased or a decreased irritability. Stress is laid upon the examination by Zuradelli, Erb, Gowers, Poore, etc.

Another indication of disordered nutrition of the muscles is fibrillary tremor; it is sometimes found at a very early stage, and even before any marked subjective symptoms are present.

Treatment.—Canstatt's words, written over forty years ago—"Much has been tried, nothing has succeeded"—could, until a few years ago, have fully expressed the results of treatment in writer's cramp. But since massage has been systematically used, the cures have far outweighed the failures. Meding, over thirty years ago, used massage empirically; Erb, in 1874, spoke of "gymnastics and massage; and Douglas Graham, in 1877, was one of the first to direct closer attention to this means of treatment.

The first reported case of cure by massage was published by Losander in 1873; but, unfortunately, another remedy was simultaneously employed—the subcutaneous injection of strychnine,—and it is not possible to ascribe the cure to massage alone. The massage treatment consisted in two

séances daily; the muscles of the thenar and hypothenar eminences, the interossei, and the lumbricales were rubbed successively. At the same time the muscles of the thumb, of the smaller finger, and of the forearm were percussed with a wooden cylinder. The patient was cured after four weeks of treatment.

The next case is one by Gottlieb. A female, æt. 52, came to him August 17, 1874; always well until 1863. She was accustomed to write nine hours a day. At this time she exposed herself to severe cold. Two years later, she suddenly became incapable of writing. The pen falls from her hand, and she is unable to resume work. Since then, the right index finger constantly refuses to act in writing, or in performing analogous work. Then the middle finger became affected; still being unable to use the thumb, she continued to write with it and the two last fingers. She then endeavored to use her left hand, and this in time became affected, but to a much lesser degree. Both hands became slightly œdematous. Thirty-seven massage séances in all were used. Complete and permanent cure.

But it was not until after Schott's publication, in 1882, that particular attention was devoted to this mode of treatment. Wolff, who claims to be the originator, is a writing-master, and as such, according to Stein, sees many children and adults with poor handwriting. Among these, there are some with writer's cramp, who lay the blame of their poor writing to incapacity, whereas it is really due to their disease. Wolff, therefore, endeavored to cure them "by a peculiar system of writing-instruction, which he combined with massage and gymnastic exercises, passive and active, applied to the muscles of the arm." Beyond doubt, Wolff has treated and cured more cases than any other single person. But he has done absolutely nothing towards communicating this mode of treatment to others. In 1884 (*N. Y. Med. Record*, p. 205, Vol. I), he says, in speaking of the priority claims of the Drs. Schott: "Both gentlemen, again and again, questioned me about my method, but they never received another response to their numerous inquiries than that the same consisted in a peculiar combination of massage and gymnastics." And in a small monograph—"The Cure of Writer's Cramp, etc." (1884)—he evades description of the method. Certainly to Schott belongs the credit of having communicated it to others, and Wolff is entitled only to the thanks of the patients he has cured, and not to those of

physicians and scientists, for he has only endeavored to obscure and hamper scientific knowledge.

Schott's mode of treatment consists in a combination of gymnastics and massage. The gymnastics consist of movements performed by the patient alone, and movements performed with the opposition of the operator. The *first* are performed by the patient during from twenty to thirty minutes; rarely for forty-five minutes. The first movements are gymnastics of the fingers—extension, flexion, abduction, and adduction, the thumb being exercised separately; thereupon the same four motions are executed at the wrist-joint, then extension and flexion of the forearm, and ultimately the arms themselves are exercised in the same manner, and are to be lifted over the head. Each single exercise is to be performed from six to twelve times. After each motion, a pause is to be observed. The *opposed movements* are to be carried out in the same manner, except that the operator must carefully resist their executions as though he were endeavoring to force the patient to perform a motion just the reverse of his intentions. Regularity of pressure is to be observed in this, so that the same amount of force is always used, and that the pressure does not vary in intensity from moment to moment.

The time to be devoted to these opposed movements is the same as that for the unopposed ones. According to the intensity of the affection the exercises must be repeated two or three times daily. The massage itself consists of two parts—nerve and muscle massage. The muscle massage is *effleurage** along the course of the nerve trunks, the median, ulnar, and radial, going upwards to the axillary and cervical plexuses. The *effleurage* lasts about ten minutes. Following this is the muscle massage. This consists of *petrissage*,† beginning with the hand and ending at the shoulder. Duration same as last movement. One sitting a day has always proved sufficient.

Schott says in from two to three weeks improvement is noticed. The treatment must not be interrupted then, but kept up for at least six to eight weeks, which time is necessary to attain a complete cure. During the treatment, the occupation of the patient must be discontinued. Schott has

* Or stroking—the maximum of force to be applied not to exceed the dead-weight of the hand.

† Or kneading—a methodical vertical pressure applied to the muscles with the fingers, hand and fist.

thus succeeded in curing all the neuroses which came under his treatment, mostly pianists, and in none of them has any return been observed.

Wolff's method, according to Stein, differs from the preceding in so far that he makes use of "a peculiar method of writing-instruction," in addition to the gymnastics and massage. "The peculiarity of the method consists in that fact, that Mr. Wolff, in consequence of years of practice and special treatment, understands how to carefully isolate those muscular groups which require a special gymnastic treatment, either with his hand or by means of rubber bands, in a way that we electro-therapeutists, even with the most minute electro-diagnostic examination, are unable to do." The accompanying illustrations give an idea as to the manner in which these bands are applied.

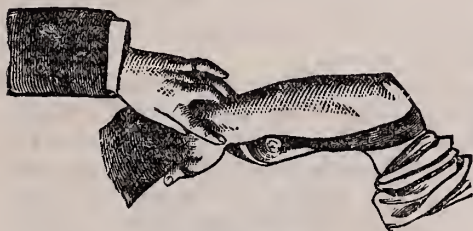


FIG. I.

Fig. I shows the patient, on whom, by means of tightly drawn rubber bands, certain muscular groups have been isolated, in the act of having passive opposed movements performed.

Fig. II shows the same in the execution of active movements.

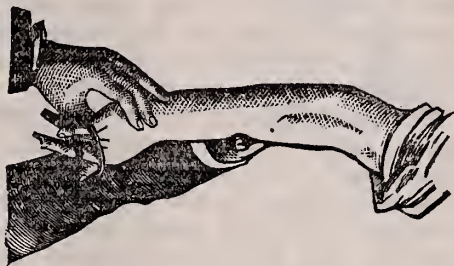


FIG. II.

Wolff has certainly achieved remarkable results by his mode of treatment, and his patients are permanently cured. From 1877 to 1882, he treated in all 277 cases of writer's cramp and similar affections; 245 were writer's cramp, and of these 132 were radically cured, 22 improved, and 91 without result; 32 cases of pianist's, violinist's, telegrapher's and painter's cramp; of these 25 were cured. In all, 157 cured, 22 improved, 98 not cured. But Wolff is not alone in ob-

taining good results; for Weiss, Podrazky, Zabłudorosky, Schreiber and Douglas Graham all report good results in the use of massage in writer's cramp.

The results obtained by Dr. Jacoby have been excellent, and, although the number of cases is necessarily limited, still it is sufficient to show that there is no secret in the method, and that good results may be obtained by any one—all that is necessary being perseverance and thoroughness; the "peculiar" combination and the "peculiar" system of writing-instruction is not essential. Patients were examined carefully, to localize, if possible, the exact seat of the affection; cases not clearly of peripheral nature were not treated at all. Particular attention during the massage was paid to the interossei, and to all the muscles of the thumb. The massage was carried out in the manner described by Schott, the idea to be kept in mind being that, by means of the exercise and massage, the weakened muscles are to be strengthened and their nutrition improved.

In order to thoroughly manipulate the interossei and lumbricales, the hand of the patient, sitting face to face with the operator, must be taken by him into both hands, and the metacarpal bones separated from each other as much as possible, and then moved upward and downward. The small end of Granville's *percuteur** will also be found very serviceable in acting upon these small and deeply-seated muscles. The larger muscles can be manipulated as described under the general head of the Technic—petrissage and massage à friction† being principally applied.

The most important part of the treatment, however, consists in the active and passive movements, with and without opposition. For the *active movements*, the following rules must be observed by the patient. The movements are to be executed: (1st) As slowly as possible; (2d) In a certain rhythm; (3d) With a certain amount of labor; (4th) Care must be taken not to over-exert the muscles; (5th) The movements must be executed three times daily, and each movement carried out from twenty-five to two hundred times.

*This instrument consists of a strong electro-magnet operated by a portable battery. This electro-magnet works an ivory-tipped percussor, in the same manner as the tongue of an electric bell is moved. By an interruptor on the side of the instrument, the current can be made or broken at will. The ivory-tipped percussor is removable, and various shaped ends may be employed.

†Energetic stroking with one hand, and strong circular movements with the other.

Every patient is first taught the following positions of the hand by heart: (1st) Fingers extended and approximated (*Fig. III*); (2d) Fingers extended and separated (*Fig. IV*); (3d) Fingers flexed at right angles to the hand and approximated (*Fig. V*); (4th) Same, but fingers separated; (5th) Fingers flexed at nuckle (first phalanx forming straight line with hand), fingers approximated (*Fig. VI*); (6th) Same, fingers separated (*Fig. VII*); (7th) Fingers flexed upon the palm and approximated (*Fig. VIII*); (8th) Same, but fingers separated as much as possible.



FIG. III.



FIG. IV.



FIG. V.



FIG. VI.



FIG. VII.



FIG. VIII.

After the patient has learned these perfectly, and by number, the following exercises are given him to exercise at home: (1) The fingers are to be brought from 1st to 2d position, one after the other (muscles exercised are the interossei, volares et dorsales, and the external fibres of the extensors). (2) Fingers to be brought successively from 1st to 3d position (muscles exercised are the flexor digit. commun., sublim., and profund., principally the former). The lumbricales and interossei also assist in this movement. (3) Fingers to be brought from 1st to 5th position (muscles exercised, flexors, principally the flexor profundus). (4) Fingers from 1st to 7th position (muscles exercised are the flexors equably and the four lumbricales). (5) Fingers from 2d to 3d position (muscles exercised are the same as No. 3, together with the interossei). (6) Fingers from 2d to 5th position. (7) From 2d to 7th position. (8) From 3d to 4th position. (9) From 3d to 5th position. (10) From 3d to 7th position. (11) From 4th to 6th position. (12) From 4th to 8th position. (13) From 5th to 7th position. (14) From 6th to 8th position.

Reversing these movements will of course exercise the antagonists; thus, in exercise 2, if instead of commencing with the 1st position, and bringing the fingers to the 3d, we reverse matters, and bring them from the 3d to the 1st, then, instead of bringing the strain upon the flexors, we do so upon the extensors. These exercises must be chosen with care, and given to the patient for execution at home, one at a time, care being taken that they are well understood and satisfactorily executed.

The *opposed movements* which are the most serviceable are the following, which of course can be executed with the aid of the operator: (1) Hand of patient in position 1, each finger is successively to be brought into position 3, while the operator endeavors by counterpressure to prevent it. (2) Fingers in position 3, operator endeavors to bring them in position 1 while the patient prevents it. (3) Fingers in position 1, to be brought to position 2 while operator opposes. (4) Fingers in position 2, to be brought to position 1 by operator while patient opposes. (5) Fingers in position 4, to be brought to 3 by the operator. Fingers in 3 to be brought to 4 by patient. (6) Fingers in position 6, to be brought to 5 by operator. Finger in 5, to be brought to 6 by patient, operator opposing.

To enable the patient to perform certain opposition movements at home, and at the same time to be sure that a cer-

tain amount of equable opposition is being used, Dr. Jacoby has constructed the following apparatus. The movements which are to be executed are simply those of extension and flexion, and the opposition is furnished by rubber bands. The apparatus consists of a metallic bracelet, inside of which is padded. One end of it consists of a ratchet, which admits of increasing the size of the bracelet to fit any arm, and at the same time allows it to be tightly fastened. Upon one

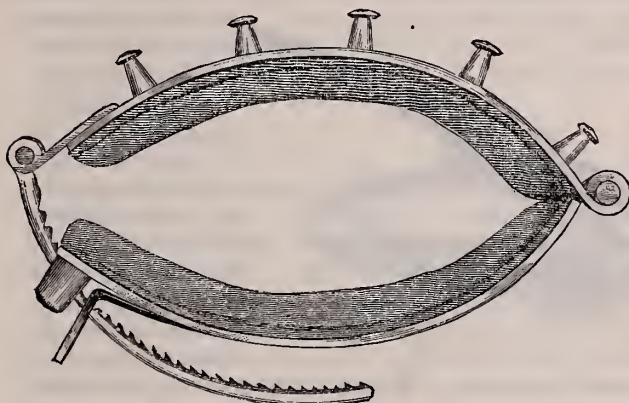


FIG. IX.

side of the bracelet, the top or bottom, as the case may be, are fastened five brass pegs. Rubber bands are fastened to these by means of leather end-pieces. The other ends of the band terminate in leather finger-coverings, which are slipped over the fingers of the hand. The bracelet is always to be adjusted just above the [wrist] joint, and tight enough to keep it from slipping. If the extensor muscles are the ones to be exercised, the bracelet must be so placed as to allow the pegs to be at the bottom. Care must be taken that the apparatus be placed on the arm in pronation for flexion movements, and in supination for extension. The kid fingers are then slipped over the fingers of the hand, and the elastic bands must be chosen for each case, and frequently of different strength for the various fingers. If the flexors are to be exercised, the bracelet is applied with pegs pointing upward, and the bands then adjusted. The opposition is



FIG. X.

thus furnished, and the patient can execute the movements at home (*Figs. IX and X*). The thumb must always be exercised separately. For opposing abduction, the band is brought from the inside of the thumb over the palm around the ulnar border of the hand, and fastened with the pegs downward. The rubber band is then brought over the back of the hand around the ulnar border and fastened to the desired peg below.

The question whether patients afflicted with one of these artisan's neuroses must give up their employment during the time of treatment, must be answered in the affirmative for all *except writers*, and these can, by means of an apparatus designed by v. Nussbaum, continue writing dur-

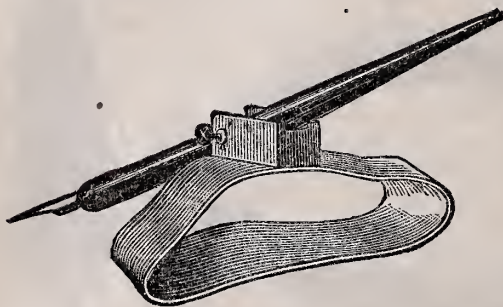


FIG. XI.

ing the time of treatment. In fact, the more they write with the apparatus, the more they hasten their recovery; v. Nussbaum, taking the idea as a basis that in writing, the flexors and adductors of the fingers are almost exclusively employed, and that the cramp is produced by over-exertion of these muscles; therefore

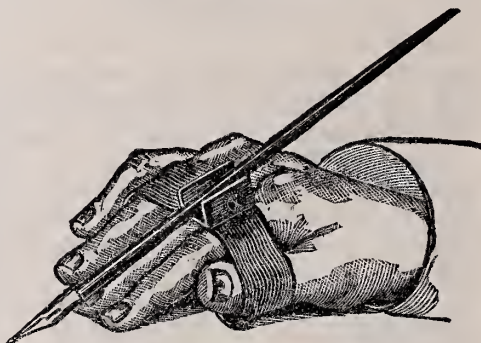


FIG. XII.

the latter can be avoided by employing the antagonists—the extensors and abductors—in all writing. The apparatus to effect this consists of a thin, oval, hard-rubber ring of about two centimetres in width (*Figs. XI and XII*). This ring is somewhat convex above, and is made to fit over the first four fingers (thumb, index, middle and ring). It is passed over these fingers, the small finger remaining outside. Upon the upper surface of the ring is a movable penholder, which

can be fastened in any position by means of a screw. The ring must be chosen somewhat wider than the fingers to be surrounded by it. In order to keep the apparatus from sliding off the hand, the patient is obliged to keep his fingers forcibly abducted, the thumb pressing upon one side, and the ring-finger upon the other. Thus the abductors and extensors are the muscles used. For persons who are obliged to keep to their business during the course of treatment, the apparatus is invaluable; as after a very few hours of practice they can write plainly and legibly, and without any exertion; and, as already stated, far from having any deleterious effect upon the results of the treatment, it may be looked upon as an ingenious adjuvant.

Ingluvin.

Ingluvin is the essential principle of the gizzard, and bears the same relation to poultry that pepsin does to the higher animals. The honor of its discovery and utilization, in its crude state, remotely dates with the Chinese gastronomer, as well as to the Caucasian chemist, in its refined condition. From time immemorial the inhabitants of the Celestial Empire have used the gizzards of chickens and ducks in nearly all made dishes. Their writers have recommended the practice as a sovereign treatment of dyspepsia, weak stomach, and vomiting. A favorite prescription of Chinese physicians for chronic indigestion is to cut up the digested chicken gizzards in hot water until they are reduced to a pulp, and then add some spices. A tablespoonful or two of the resulting paste is taken at each meal until the patient has entirely recovered. From China the practice passed to other parts of Asia, and was adopted here and there among the Mediterranean peoples. Strange to say, it was never learned by the great nations of Europe until the latter part of the present century. On the other hand, the organic chemists of Europe discovered, about 1850, a powerful nitrogenous radical in the gizzard. Experiments thereafter showed it to possess many of the qualities of pepsin. These experiments led to its isolation. Numberless experiments have proven it to be a very valuable addition to therapeutics. Where pepsin refuses to act, and where, in severe cases, it has been rejected by the stomach, ingluvin effected relief rapidly, and with the greatest ease.

In four recent cases of poisoning by root beer (Brooklyn, June, 1886), Dr. George Everson, Jr., a well known physician of that city, reports that after pepsin and all other sim-

ilar compounds had been rejected by the stomachs of his patients, ingluvin stayed the retching, and enabled them to retain the digested food. Dr. Lassing reports a similar experience in several cases of acute dyspepsia. *A priori*, it would seem as if ingluvin should be more efficient and potent than pepsin in many cases of physical disorder.

Our poultry are chiefly granivores, and have no beak nor other buccal apparatus for crushing the hard grain and seeds on which they so largely feed. The food is swallowed when apprehended, and passes immediately into the crop or gizzard. This seems to act both mechanically and chemically. Its interior walls are covered by a dense, hard cutaneous membrane, surrounded by muscles of the most powerful type. Along with the food is always a small amount of sand and gravel. The organ acts apparently by bruising and cracking, rather than as is commonly believed, by trituration. The motion of the ingluvial muscles is accompanied by a slow, but continuous exudation, from the walls of the crop, of a strong organic fluid, of which ingluvin is the chief constituent. The hull of the grain or the shell of the seed is broken by the pressure of the walls and the gravel, and their interior is exposed to the chemical action of the ingluvin. By the time it reaches the stomach, it is ready for the gastric juices. From this point on, digestion proceeds as with the higher animals. As the gallinacæ have very small salivary glands, and as the fluid secreted by these resemble the secretion of the parotid rather than that of the sublingual and maxillary glands of the human being, it would seem as if ingluvin played a double part, exercising the functions of the ptyalin of the saliva as well as the pepsin of the stomach. Inguvin is prepared by the far-seeing chemists, Wm. R. Warner & Co., of Philadelphia. It is made from selected gizzards, and is so carefully extracted as to be free from all foreign organic bodies. It is already known and appreciated by the medical profession.

Prof. Roberts Bartholow, M. A., M. D., LL. D., in his late work on "Materia Medica and Therapeutics," says: "*Ingluvin*. This is a preparation from the gizzard of the domestic chicken—*ventriculus callosus gallinacous*. Dose, gr. v.—ʒj." Inguvin has the remarkable property of arresting certain kinds of vomiting—notably, the *vomiting of pregnancy*. It is a stomachic tonic, and relieves *indigestion, flatulence, and dyspepsia*.

The author's experience is confirmatory of the statements which have been put forth regarding the exceptional power

of this agent to arrest the vomiting of pregnancy. It can be administered in inflammatory conditions of the mucous membrane, as it has no irritant effect. Under ordinary circumstances, and when the object of its administration is to promote the digestive function, it should be administered after meals. When the object is to arrest the vomiting of pregnancy, it should be given before meals.—*American Analyst*, August 1st, 1886.

Book Notices.

- (1) **Manual on Inhalers, Inhalations, and Inhalants, and Guide to their Discriminating Use in the Treatment of Common Catarrhal Diseases of the Respiratory Tract.** By BEVERLEY ROBINSON, M. D., Clinical Professor of Medicine in Bellevue Hospital Medical College, New York, etc. 1886. George S. Davis, Detroit. Paper. 12 mo. Pp. 72. Price, 25 cents.
- (2) **Use of Electricity in the Removal of Superfluous Hair, and Treatment of Various Facial Blemishes.** By GEORGE HENRY FOX, A. M., M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons of New York, etc. George S. Davis, Detroit. 1886. Paper. 12 mo. Pp. 67. Price, 25 cents.
- (3 and 4) **New Medications.** By PROF. DUJARDIN BEAUMÉTZ, Physician to the Cochin Hospital, etc., Paris. Translated by E. P. HURD, M. D., one of the Physicians to the Anna Jacques Hospital, Newburyport, Mass. Two Parts, with Appendices and Illustrations. 1886. George S. Davis, Detroit. Paper. 12 mo. Pp. 128 and 192 respectively. Price, 25 cents each part.
- (5) **Classification and Treatment of Ear Diseases.** By SAMUEL SEXTON, M. D., Aural Surgeon and W. A. BARTLETT, M. D., and ROBERT BARCLAY, M. D., Assistant Surgeons New York Eye and Ear Infirmary, etc. 1886. George S. Davis, Detroit. Paper. 12 mo. Pp. 95. Price, 25 cents. (All from Publishers-).

We have grouped these five pamphlet books together, not for purpose of reviewing them in detail, but principally to call attention to and heartily commend this "new departure" by the well-known Detroit medical publisher. Mr. Davis proposes to publish during the twelve months, begun January, 1886, twelve original works by eminent authors on practical medical subjects—all under the title of "The Physicians' Leisure Library." The annual complete series will be sold for \$2.50, or single volumes for 25 cents each. Thus we see at once the advantage this "Library" has over "Wood's Library;" a purchaser can get any book he wishes

without having to follow the dictum of the publisher as to what he *shall* buy. The subjects discussed in the *Physicians' Leisure Library* are of just as practical moment to the doctor, the authors are just as well selected, and the prices are very much cheaper than for *Wood's Library*.

We sincerely trust that Mr. Davis will be encouraged by the liberal patronage of the profession to continue the good work he has so well begun. The taste displayed in the general make up of the books is very pleasing. Let each of our readers send twenty-five or fifty cents for a specimen number or two of the series, and we are quite confident he will continue his patronage.

Each of the volumes named in the title is on a practical subject, is well written with an eye to utility, and the teachings are reliable. To the general practitioner we would especially suggest that he send the publisher fifty cents and get the two volumes on "New Medications," by Dujardin-Beaumetz, as specimens of the series, and as books that will be of every day use.

We would suggest to the publisher, as an improvement, that it would very much help the finding of one of the books, after they are placed on ends in the library case, if the title and name of author were printed on the back of each of the volumes. As they now are, the reader has to take down all the library to look for the title or name of author on the first cover page.

System of Practical Medicine by American Authors. Edited by WILLIAM PEPPER, M. D., LL. D., Provost and Professor of the Theory and Practice of Medicine, and of Clinical Medicine, in University of Pennsylvania, etc. Assisted by LOUIS STARR, M. D., Clinical Professor of Diseases of Children in Hospital of University of Pennsylvania. Volume V—*Diseases of the Nervous System*. Philadelphia: Lee Brothers & Co. 1886. Svo. Pp. 1,326. Leather—Price, \$6. (From Publishers).

This is the completing volume of the "System." It is in every way equal in merit to any of the preceding volumes. True, of the 23 contributors as authors to this volume, we were surprised at not seeing some names as writers of some articles perhaps more familiar to the medical reader than a few of those whose names head their articles. Conspicuous because of the omission is the name of Hammond—the one who, in this country, at least, has done more to educate the professional mind in regard to nervous diseases than any one whose name is mentioned. But those who have been substituted for such illustrious authors have done their duty

with as successful results, and their fame will soon become as extensive and considered as authoritative.

Considered as a treatise on nervous diseases alone, this Volume V would at once assume rank as about the fullest, as well as most practical of the several one-volume books on the subjects. • And when considered as a part of a System of Practice, were there not intrinsic merit in the volumes that have been published, this volume would bring the whole of the System up to the highest standard of demand. We cannot say too much in praise of the design and execution of the editors, publishers and authors. The volumes are simply invaluable to every practitioner who seeks to keep up with the times. And when purchased, one may feel that he has provided himself with authorities that will remain standard for almost a lifetime.

This *System* is excellently indexed. In addition to an index of from thirty-five to fifty pages appended to each volume, this last volume (V) has a good *general* index, which refers to omissions in the index of each of the preceding volumes.

Reynold's (English) System and Ziemssen's (German) Cyclopædia have had their day. Neither of them were exactly suited to American practitioners, or whatever value the latter work ever had was practically stored away in some one of the twenty volumes in such a way that the imperfect index could not tell where to look for it. But *Pepper's System* is exactly what was wanted by American doctors.

Editorial.

Medical Examining Board of Virginia.

Each succeeding year binds closer and closer the general good of the profession, and the work of the Medical Examining Board; and no less marked is the increased interest and confidence manifested in its success by the public.

At the request of some earnest workers on the Virginia Board, we desire to call attention to several defects, that merit prompt and careful consideration. The first relates to the manner of conducting the examinations at the semi-annual meetings of the Board. We blush to publish it and yet it is believed to be true, that there has been fraud practiced on the Board by some who have stood the examinations. By men who have failed and by others who were successful in passing the examinations, testimony has been given confirming the suspicion that some left the examination hall, carrying with them the questions, and after study-

ing text books, returned and wrote their papers, and that after signing a pledge that they would not give nor receive assistance. The Board's certificate should be a recognized guarantee of proficiency, but if it is found in the possession of deficient men it will soon be considered an empty honor. It is not just to the men who pass on their merit, to allow the *opportunity* for fraud, and the Board should adopt stringent rules to prevent such an evil. At the next meeting of the Board something like the following resolutions we are told will be offered, and we publish them in order that members may have time to give them due consideration.

1. *Resolved*, That the session of the Board shall continue for two days. On the 1st day from 9 until 12, shall be devoted to the examination in chemistry; 12 until 3, to anatomy; from 4 until 7, to physiology; from 8 until 11, to materia medica and therapeutics. On the second day, from 9 until 12, to hygiene and medical jurisprudence; from 12 until 3, to obstetrics and gynæcology, from 4 until 7, to practice of medicine, and from 8 until 11, to surgery.

2. *Resolved*, That all questions shall be written on a black board, and placed in a conspicuous position. That at the expiration of the time allowed for that section, the papers shall be called for and questions for the next section put up. That no applicant shall absent himself from the examination hall without permission of the presiding officer until he has handed in his papers on the section then before the class.

3. *Resolved*, That the applicant shall sign his papers with a number, furnished him by the Secretary, who shall record the number after the applicants name on his registered list, and that only the President and Secretary shall be allowed to examine the aggregate sheet during the examination.

The Board has adopted no by-laws to govern its action, and it must seem very strange to those who write for them, when they are informed that a legalized Board has no governing rules. A committee entrusted with the important duty of drafting by-laws was appointed soon after the organization of the Board, but from want of time, interest, or some unknown cause the committee has never reported. We hope the acting President will appoint a new committee who will more faithfully and promptly discharge their duties.

We would also suggest the appointment of a committee to report on the inter-State legislation necessary to regulate practice on the lines of border States having Boards of Examiners similar to that of Virginia. Trouble in this quarter may arise at any time, and it is right that some understanding between the Boards of the States should be reached.

New Professors at University of Virginia.

Some two months ago, Dr. Wm. B. Towles was elected Professor of Anatomy, and of Materia Medica and Therapeutics—an excellent selection.

At the August session of the Board of Visitors, Dr. Wm. Dabney, late President of the Virginia State Board of Medical Examiners, and possessing many other professional honors, was elected Professor of Practice of Medicine and Obstetrics and Diseases of Children. A better selection could not have been made.

Dr. Robert L. Page

Has moved from Mechum's River, Va., to Danville, Va., where he will continue the practice of his profession.

In the Advertisement of Messrs. Geo. K. Hopkins & Co.,

In our August issue, the type got jumbled up and said things not intended. Read the revision in this issue. Every country doctor especially is interested.

Obituary Record.

Dr. Frank Hastings Hamilton.

This great surgeon, and a warm friend and continuous subscriber of this journal from its first issue, in 1874, died at his residence, in New York city, August 11th. He had been in bad health for about two years, having been the victim of fibroid phthisis. The *Boston Medical and Surgical Journal* of August 19th gives a good biographical sketch, which we append:

"Dr Hamilton was born at Wilmington, Vermont, September 10th, 1813, and was graduated from the Medical Department of the University of Pennsylvania at the early age of twenty. After remaining for a short time at his home in Vermont, he commenced practice at Auburn, New York, where he soon won an enviable reputation as a surgeon. Five years after receiving his medical degree, he was appointed Professor of Surgery in the Fairfield (New York) Medical School, and one year later he gave up his position to accept a similar one at the Geneva (New York) School. He remained at Geneva for nearly four years, and then went to Buffalo, where, together with the late Drs. Austin Flint and James P. White, he was instrumental in organizing the present Medical Department of the University of Buffalo. From 1846 to 1860, he remained Professor of

Surgery, constantly adding to his laurels as a distinguished surgeon and teacher. In 1860, he accepted the Professorship of Surgery in the Long Island College Hospital, and removed to Brooklyn; but scarcely had he settled in his new home when the Civil War broke out, and he entered the Army as Surgeon of the 31st Regiment New York Volunteers. Between his entrance into the military service and 1863, he was successively promoted to the grades of Brigade Surgeon, Corps Surgeon, under Keyes, and Medical Inspector of the United States Army. After leaving the Army, he came to New York to reside, and was one of the founders of Bellevue Hospital Medical College, in which school he occupied the chair of Surgery until 1875, when he resigned. He still retained his position as one of the surgeons to Bellevue Hospital, however, and continued to hold surgical clinics, which were largely attended.

"Not only as a practical surgeon and a teacher of surgery, but also as a writer, Dr. Hamilton attained the highest eminence. His standard work on 'Fractures and Dislocations' has gone through seven editions, and has been translated into both French and German. Among the other widely-known works, in addition to a large number of valuable monographs, are 'Prognosis in Fractures,' 'Treatise on Military Surgery,' 'New Views on Provisional Callus,' and 'Treatise on the Principles and Practice of Surgery.' The latter (published originally in 1872) was the work in which he took the greatest pride, and he felt that the crowning labor of his industrial life was the completion of the third edition of the book, which was issued only a few weeks since. He was also highly distinguished as an inventor of surgical appliances; and one of the most useful of his achievements in this field was the introduction of gutta-percha for splints for application to irregular surfaces.

"Almost immediately after President Garfield was shot, Dr. Hamilton was summoned to his bedside at the particular request of Mrs. Garfield, who was naturally anxious to secure the most eminent surgical talent in the country, and he went on to Washington by a special train, remaining almost constantly in attendance upon the wounded President until his death at Long Branch.

"Dr. Hamilton was Consulting Surgeon to St. Elizabeth's Hospital, and a large number of other medical institutions in New York, and at various times was President of the Medical Society of the State of New York, the New York Pathological Society, the Society of Medical Jurisprudence and State Medicine, and other scientific bodies."

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RICHMOND, OCTOBER, 1886.

Original Communications.

ART. I.—The Necessity of Recognizing “Reflex Spasm” Produced by “Point Pressure” in Contractured Tissues, and of Making Proper Division of the Same before any Mechanical Treatment Can be Effectual.* By LEWIS HALL SAYRE, M. D., New York, N. Y.

Within the last few months several cases of talipes have fallen under my observation, where great loss of time, to say nothing of the pain and inconvenience borne by the patient, had resulted from the failure to recognize the conditions to which I shall draw your attention this evening.

Deformities are usually classed under two heads—congenital and acquired.

These two classes are subdivided into (1) deformities due to paralysis, and (2) into those due to contraction or shortening of certain tissues.

Contracted tissues may be divided into (1) *contracted*, and (2) *contractured*.

A *contracted* tissue is one which is simply shortened and

* Read before the Orthopædic Section of the New York Academy of Medicine, March 19th, 1886.

impaired in its movements, and which can be restored to its normal condition and length by simple stretching and manipulations.

A *contractured* tissue is one where the parts forming the tissue have become changed in their anatomical structure to each other, and cannot be lengthened except by the severance of the resisting tissues.

Upon the recognition of which class of shortened tissue is before you will depend the selection of the means most proper for the treatment, and consequent removal of the resulting deformity. And as the two classes demand somewhat different treatment, it would be well did we have some rule to aid us in our diagnosis.

The following simple rule has been of great service in determining which class of contraction is present in a given case, and has been the rule by which my father has been governed for many years:

When a contracted tissue is put upon the stretch, and the parts are brought as nearly as possible into their normal position, either by means of the hands, or mechanical aids, and then *additional* pressure is made upon the tissue thus stretched, either by making pressure upon the stretched tissue with the fingers, or by pinching it between the thumb and fingers, and no pain or voluntary spasm is caused, the tissue thus stretched and handled is simply *contracted*, and can be elongated by persistent traction and treatment.

If, on the contrary, this additional, or "point pressure," upon an already stretched tissue causes pain and an involuntary contraction, or spasm of the muscles of the entire body, the tissue thus stretched has become *contractured* or changed in its structure, and must be severed before the parts can be brought into their normal relations.

To attempt to stretch a *contractured* tissue is to subject the patient to a great amount of unnecessary pain, and at the same time run the chance of producing serious disturbances of the nervous system, as the involuntary contraction or "reflex spasm" of the muscular system is produced, in a less degree may-be, every time the *contractured* tissue is stretched. And you are all well aware of the disastrous re-

sults which sometimes follow long continued irritation of the nervous system, both from "reflex" and other causes.

Cases which have *contractured* tissues causing deformities, must have those resisting bands removed; and, in my opinion, this can best be done by subcutaneous tenotomy of *all the contractured* tissues, and the restoration of the parts to their normal positions at the time of operation. To attempt to rupture these tissues by manual or mechanical force is to subject the patient to the danger of a ruptured artery or nerve, as a force sufficient to tear these dense tissues could not readily be released before damage to other and more yielding tissues might be done.

By dividing subcutaneously *all* the shortened or *contractured* tissues, and immediately placing the parts in their normal positions, and retaining them there, having closed the wound made by the tenotome hermetically, the separation between the severed ends of the tendon, muscle or fascia becomes filled with blood, serum or lymph, which, being protected from atmospheric influences, becomes organized, and makes the tissue divided as much longer as the distance between the severed ends. Should the skin be also *contractured*, as is frequently the case, it must be freely divided. In this case, the wound, of course, would be an open one, and must heal by granulation, under antiseptic precautions, being careful to retain the parts in their normal or desired position during this process, and preventing any contractions until the wound is thoroughly healed, and the new tissues have become firm and healthy.

After this has taken place, massage, frictions, active and passive motions, with the use of electricity to develop the weakened muscles, together with such mechanical appliances as may be required by each case, will be demanded, and must be thoroughly practiced for many months before the cure is complete. But to endeavor to stretch a *contractured* tissue, one which causes a "reflex spasm" when "point pressure" is applied, will result in great loss of time, and disappointment to the surgeon, as well as cause the patient unnecessary pain, and possibly give rise to serious disturbances of the nervous system—all of which can be avoided

by recognizing the importance of the "reflex spasm" produced by "point pressure" in *contractured* tissues, their proper division, and replacement of the parts in the normal position at the time of operation, and retention during the time the divided tissues are re-uniting, thus preparing the way for appropriate after-treatment, which will in many cases yield most gratifying results, without trouble or annoyance to the surgeon, or causing the patient any pain or inconvenience.

The following cases illustrate the advantage of recognizing the doctrine above inculcated :

CASE I.—L. S., aged 8, only child of healthy parents, when a little more than a year old, had a slight convulsion, followed by high fever, and resulted in complete paralysis. From this she recovered to a great extent, although she has indistinct articulation, and imperfect use of the arms and legs. Both feet are varo-equinus. The tendo-achilles and plantar fascia of both feet give a reflex spasm on point pressure. Since she was 4 years of age, she has been under constant medical attention, and has had the feet manipulated and rubbed, and has worn braces of different varieties, but there has been no change in the deformity.

On *January 27th*, 1886, the tendo-achilles and plantar fascia of both feet were divided subcutaneously, and the feet restored to their normal position immediately after the operation, and retained there by foot-board and usual dressing. She suffered no inconvenience after the operation, and on *February 8th*, the dressings were removed, the feet being in their proper position, and the wounds entirely healed. Can stand and walk with feet flat upon the floor. Is to continue massage and electricity. No braces were applied.

March 8th.—Patient returned. Has improved more since the operation than in all the years previous.

CASE II.—C. G., æt. 14, strong, healthy boy, of good family history. When 2 years of age, he had a fall, resulting in paralysis of the right limb and part of the trunk; also bladder and rectum. The bladder and rectum recovered their power in a few days, and some months afterwards he began to walk, but did not put the heel of the foot to the ground, walking on the anterior part of the foot (talipes equinus). He was treated at this time by manipulation, and improved. But the foot could not be brought to a right angle with the leg; and as he grew older the deformity increased. He has

been under the care of many different physicians, and has worn braces of many kinds, until two years ago, when treatment was abandoned, except wearing the braces. The patient has now well-marked talipes equinus. The entire limb is undeveloped and shorter than the other. As "point pressure" developed "reflex spasm" in the tendo-achilles and plantar fascia, they were divided subcutaneously, the patient being anæsthetized, and the foot placed at a right angle with the leg, and retained there in the usual way. The boy suffered some pain from a large callous on the ball of the great toe becoming inflamed from the severe pressure, requiring the re-adjustment of the bandages and foot-board shortly after the operation. The dressings were removed at the end of a fortnight, when the wounds were healed, and the foot could be flexed to a right angle voluntarily and extended slightly, showing that the tendo-achilles was united. A high-heeled shoe (to equalize the length of limbs), with artificial muscles to flex the foot, was applied. Galvanism, massage, etc., to be applied to develop the limb.

The boy can now (two years after the operation) flex and extend the foot readily, and the development of the limb has been most marked.

285 Fifth Ave.

ART. II.—Perimetritis—A Clinical and Analytical Study. By GEORGE T. HARRISON, M. A., M. D., lately Assistant Surgeon to New York State Woman's Hospital; Honorary Fellow Medical Society of Virginia, etc., New York, N. Y.

In the whole domain of gynæcology no morbid condition can be mentioned which exceeds perimetritis in pathological significance, or suggest more fruitful topic for study, whether regarded from an ætiological, diagnostic, or therapeutical point of view. Especially of late has this theme acquired new interest, from the fact that the disease to which it relates has been more and more brought within the sphere of operative surgery. The problem presented for solution is to know beforehand what class of cases *demand* for their relief surgical procedures—more particularly laparotomy—and what class or classes there are, on the contrary, in which interference of a surgical character is strictly *contra-indicated*.

While much light has been thrown upon all questions pertaining to perimetritis within the last few years by bacteriological investigations and by clinical investigations, gained especially in laparotomies, it cannot be said that the subject has reached such an advanced stage of development as to admit of dogmatic exposition. Our present attainments should be regarded as but stepping-stones to firmer ground, to be reached hereafter.

It is well to bear in mind, at the outset of this discussion, that inflammations of the pelvic peritonæum have a different significance and manifest different symptoms according as they are caused by infection from without or not. Most forms of perimetritis are indisputably due to infection from without, though the existence of a benign form cannot be denied, however difficult we may find the explanation of its pathology. After the manner of Schröder,* we may therefore discriminate the following forms:

1. A benign non-infectious perimetritis.
2. An infectious perimetritis; and this latter group may be subdivided into
 - (a) Septic form of perimetritis.
 - (b) Gonorrhœal form.

First, then, let us direct our attention to the *benign form*. During the sexual life of woman, the uterus and its appendages† are subjected to many accidents and vicissitudes, which result in inflammatory disorders, and in which the peritonæum may participate to a greater or less extent. Backward displacement of the uterus is ordinarily attended by hyperæmia; and, as a consequence, partial perimetritis may be induced, which leads to adhesions of the uterus to the adjacent parts. In the same way prolapsus of the ovary is often associated with a partial peritonitis. Ovarian cystomata not infrequently give rise to this form of perimetritis in consequence of the rupture of one of their component cysts, and

* *Die Krankheiten der Weibl. Geschlechtsorg.*, p. 444, 7th Aufl.

† Though I use this term in obedience to usage, I confess to sharing the views of Dr. A. Meadows, when he says: "It appears to me to express a physiological error; for the ovaries and the Fallopian tubes ought certainly not to be regarded merely as appendages to the uterus. Rather I should say that the uterus is an appendage to the other organs which are undoubtedly its superior in physiological work."—*British Med. Journal.*, Aug. 21, 1886.

escape of the contents into the abdominal cavity. Called into existence by causes such as these, the benign form of peritonitis has as its anatomical characteristics pseudo-membranes and adhesions of the most manifold description. The constituent organs of the pelvis may be found adherent to each other in the most varied manner. The intestines lying in the pelvic cavity may be attached to the posterior surface of the uterus, or to the ligamentum latum; or they may be intimately connected with the ovary or tube, or the tubes may be flexed by cords, or fastened to the side of the pelvis, or even bent backward and tied to the posterior face of the uterus.

It is certainly a subject of wonder that these mighty changes are brought about with so few and such trivial symptoms. The symptoms, in fact, we are wont to associate with peritonitis are not present—as pain, vomiting, meteorism, a small, frequent pulse, and an anxious, pinched expression of the face. How often is the ovariologist astonished at the magnitude and extent of the adhesions, on exposing the abdominal cavity, in cases in which he could not demonstrate the existence of peritonitis previously to the time of the operation! The pseudo-membranes exhibit great diversities in regard to thickness and extent. They may appear as bands or cords, or they may separate portions of the pelvis from the remainder of the general peritoneal cavity. Into the spaces thus formed, serous or sero-fibrinous effusions take place.

The *infectious forms of perimetritis*, as modern bacteriological research has shown, are evoked by micro-organisms, which gain admission into the body, and their unfold their activities. Says Schröder:* “At present, omitting erysipelas and diphtheria, we are only able to discriminate strictly and exactly, two forms of bacterial infection—the *septic*, in the wider sense, and the *gonorrhæal*. In the septic form also, we have to deal with different forms of micro-organisms, and with considerable differences in the course of the disease; but at the present moment we are not able to discriminate them with exactness. The infection which leads to septic, partial or general peritonitis, either invades the abdominal

**L. c.*, p. 448.

cavity through the uterus and the tubes, following the course of the mucous membrane, or the micro-organisms make their way through a gap (wound) in the covering tissue into the connective tissue, penetrating into its spaces or into the lymph and blood-vessels, and attain to the peritonæum, and advance beyond it."

Septic infection occurs almost always after childbirth, or in consequence of a gynæcological operative procedure—the *materia peccans*, gaining admission into the organism through a wound which has been made at some point along the genital tract. The micro-organism, potent in the production of the infection, is mainly, so far as our present bacteriological knowledge gives us information, the chain-forming micrococcus, or Rosenboch's streptococcus pyogenes.

On autopsy, after this form of perimetritis, we find in some cases a small quantity of fluid containing large quantities of micrococci; in other cases there is an excessive amount of a purulent fluid, or the exudation of a purulent fibrinous character. The exudation naturally seeks the lowest level, and consequently is often situate in Douglas' cul-de-sac, being shut off from the sound part of the abdominal cavity by pseudo-membranes which unite together loops of the small intestine, parts of the colon, omentum, or uterus with appendages. If the exudation increases in quantity, under these circumstances, we have a condition of things closely simulating retro-uterine hæmatocele—the uterus and ligamentum latum being dislocated forwards towards the symphysis pubis, and the bottom of Douglas' pouch being distended especially in a downward and forward direction, the vagina and rectum being thus largely encroached upon. In those cases where there is a closure of Douglas' space, the result of a previous perimetritic inflammation, a limited exudation may take place into cavities, shut in by pseudo-membranes on either side of the Douglas pouch; and as the exudation goes on, in view of the fact that the soft tissues below yield more readily than the pseudo-membranous expansion above, we may have before us apparently a case of perimetritis. When the exudation is very extensive, under the condition just mentioned, it may fill up the whole of the

lower part of the abdominal cavity, extending up to or beyond the umbilicus. Such a case I saw not long since with Dr. A. R. Robinson, of this city, in which there had been a closure of Douglas' pouch in consequence of a previous peritonitis, and in which now the whole of the lower part of the abdominal cavity was occupied by an enormous exudation. These large accumulations of infectious fluid often break their way into the rectum; less often into the vagina, and now and then into the bladder. I had last year under my professional care a case in which there was a double perforation into the intestine and into the bladder; it terminated fatally.

The *symptoms* of septic perimetritis are those dependent on the local inflammation, and those due to the toxic effects of ptomaines, which have been engendered from the proteids of the body by the intervention of the putrefactive and pathogenic bacteria. After a more or less stormy course, in which the integrity of the body is jeopardized to a greater or less degree, there follows an interval during which the exudation undergoes absorption, and the recent adhesions experience a process of shrinkage. Meantime the general condition improves progressively, and as time wears on, is less and less clouded.

The *local annoyances* are those principally emphasized by the patient—pains in the pelvic region, existing either of a permanent character, or undergoing exacerbations from time to time. The evacuation of the bladder and rectum are attended with difficulty and pain—the action of the abdominal muscles, which is called into play in the performance of these functions, having the effect of producing a certain degree of change of place on the part of the exudations. Gradually the pains diminish in intensity and duration; the urine is voided without pain, and only when large fœcal masses are passed is there pain in defecation. Menstruation which may have been absent for some time, returns, and all the symptoms show amelioration.

The picture has much deeper shadows when the exudation becomes purulent. In this event, either absorption takes place slowly, accompanied by an intermittent fever, with evening

exacerbations and morning intermissions, or the suppurative process continues and the tumor grows, while a fever with morning remissions shows the effects on the system at large. Death may take place from exhaustion, or the abscess may break, and the patient may endure a wretched and pitiable existence for a long time before a more or less complete restoration to health takes place.

Sterility is by no means infrequently a consequence of the changes effected in the genital organs by this form of perimetritis—these changes consisting in constriction or occlusion of the tubes, envelopment of the ovaries by an exudation, and dislocations and fixations of the uterus.

The *gonorrhœal form of perimetritis* exhibits essentially different clinical and anatomical features from those just discussed, which it is of paramount importance to fix in mind. When Dr. E. Næggerath, of this city, published his brochure upon “latent gonorrhœa in the female sex,” in 1872, his statements were regarded generally as the wildest exaggerations; but gynæcologists, after a more thorough investigation of the subject, have become more and more convinced of the truth of his observations and the correctness of his conclusions. My own views differ from those of Dr. Næggerath only this far: that while chronic specific urethritis in man *may* evoke that train of symptoms which he so eloquently and faithfully depicts, it does not by any means always produce such results; and that latent gonorrhœa in man is susceptible of cure. I can refer to such an experience as the following in my practice: A young man has consulted me with reference to symptoms, which proved to be due to a deep-seated urethritis and an incipient stricture. Such a case I have cured by dilatation and injections. The patient has married, and I have attended the wife in four or five confinements. The children have all been born at full term, and she has never exhibited any symptoms whatever of the gonorrhœal infection.

It has been my endeavor, in my clinical studies of this form of perimetritis, to act on the excellent advice given by Dr. Næggerath—“to draw into the circle of our investigations not only the woman, but in each individual case to

elicit accurately the history of the husband.⁴ The following are the results at which Dr. Næggerath has arrived:

"1. Gonorrhœa in man, as in woman, continues, as a rule, during the whole of life, in spite of apparent cure.

"2. There is a latent gonorrhœa in man, as in woman.

"3. Latent gonorrhœa in man, as in woman, may evoke in a hitherto sound individual either a latent gonorrhœa or the phenomena of acute gonorrhœa.

"4. Latent gonorrhœa in woman manifests itself in the course of time by acute, chronic, recurring perimetritis or ovaritis, and as catarrh of particular parts of the genital mucous membrane.

"5. The wives of men who at some time of their lives have had gonorrhœa are, as a rule, sterile.

"6. Those who become pregnant either abort or only give birth to one child. Exceptionally, they bear three or four children.

"7. Out of the secretion of those affected with a latent gonorrhœa a fungus may be cultivated which is completely analogous to that derived from the florid gonorrhœal secretion in man."

I can heartily subscribe to the estimate which Sænger places upon the researches of Næggerath when he says,"* "the recognition of the ætiological connection of severe disease of the sexual organs with gonorrhœa, by Næggerath, is for gynecology a performance scarcely less than that of Semmelweis for obstetrics."

On account of the great importance of the subject, I quote this author's criticism upon Næggerath's classification, and give *his*, though it is somewhat of a digression from my proper theme. "Næggerath's classification," he remarks, "of latent gonorrhœa into (1) acute perimetritis, (2) recurring perimetritis, (3) chronic perimetritis, (4) ovaritis, has many defects. It is tautological and one-sided, as it selects at random some forms of disease only, and especially allows no place for the tubes. The idea 'latent gonorrhœa' can, at the most, be regarded in a subjective sense; it will generally be possible to demonstrate signs of the disease objectively." The following is the classification proposed by Sænger: "*Acute and chronic gonorrhœa of the uro-genital organs.*"

**Archiv. fur Gynækologie, Bd. XXV, Hft. 1, p. 126.*

"I. Urethra, bladder, kidneys.

"II. Vulva and its glands.

"III. Vagina, uterus (gonorrhœal catarrhs).

"IV. Uterine appendages:

(1) Tubes: Salpingitis and pyo-salpingitis, peri-salpingitis (extension from within without).

(2) Ovaries: Peri-öophoritis, öophoritis and abscess of the ovary (extension from without within, or from the hilus ovarii).

"V. Parametrium and cellular tissue of the ligamenta lata; phlegmon paracervicalis, parauterina (parametritis), pelvica phlegmon ligamenti lati. (Säenger saw one case of abscess of the right ligamentum latum in purulent salpingitis.)

"VI. Pelvi-peritonæum and serosa of the ligamenta lata; pelvi-peritonitis (perimetritis) unilateralis; pelvi-peritonitis diffusa."

The beautiful studies of Bumm* have contributed much to our knowledge of the mode of infection in gonorrhœal inflammations. Neisser discovered the pathogenic micro-organism, diplococcus, which is the bearer of infection in gonorrhœa. According to Bumm, the most frequent seat of gonorrhœa in women is the mucous membrane of the cervix. "In fresh cases," he observes, "we meet there a swelling of the inflamed and reddened mucous membrane of high degree, which protrudes through the opening of the orifice, as in acute gonorrhœa of the urethra, and on pressure with the speculum permits the escape of the ominous drop of pus. The secretion remains for weeks purulent, and contains, besides distended epithelial cells and multinuclear pus cells, heaps of gonococci, partly enclosed by a cellular body, partly free; other organisms are completely wanting, or are extremely rare, a circumstance which naturally simplifies and facilitates the diagnosis of gonorrhœa." The gonococci find in the urethra also favorable conditions for the display of their special activities.

On the contrary, Bumm denies the existence of a true

**Der Mikro-organismus der Gonorrhœeschen Schleim-hauterkrankung*, Wiesbaden, 1885.

vaginal gonorrhœa, as he believes that the anatomical character of the vaginal mucous membrane is such that it is not possible for the specific micro-organisms to penetrate deep into the mucosa. The vagina, however, subserves the purpose of a receptacle and brooding-place for the contagium under certain circumstances. When the vulvo-vaginal glands are the seat of a suppurative process, it may be assumed as almost a certainty that it is a case of gonorrhœal infection.

From the cervix the gonococci attain to the mucous membrane of the uterus, and thence into the tubes. Here they produce the most important and the most persistent changes from the normal condition. Through the medium of the tubes, finally, the peritonæum is involved. The specific inflammation penetrates through the thickened walls of the tubes, and attacks their serous investment, producing pseudomembranous deposits and adhesions, or the gonococci attain to the swollen and reddened fimbriated extremities of the tubes, and give rise here to local adhesive peritonitis.

The view of Sæenger* is probably correct that the pelvi-peritoneal exudations perhaps always originate after the escape of pus from the tubes, while the latent insidious perimetritic forms of inflammation are propagated from the diseased wall of the tube. As a consequence of this specific form of inflammation, the occluded tube is distorted into convolutions and flexures, and is distended with a greenish purulent fluid. One convolution is often found before, and another behind the ovary—the contents of the pelvis being matted together into a confused coherent mass.

Let us now endeavor to sketch the *clinical picture* of this form of perimetritis: At times the symptoms develop so slowly and insidiously that the patient cannot date her symptoms back to any particular time when she was aware of their commencement. Besides pains in the hypogastrium, and a frequent desire to urinate, she may have complained of few positive and definite symptoms, and the physician is consulted rather on account of sterility than from any other cause. In other cases the patient has never felt well since marriage, and grows progressively worse, although her com-

*L. c., p. 128.

plaints are not of a definite character, and often seduce the unwary practitioner into the diagnosis of hysteria, until all of a sudden there is an acute perimetritis, with pain and elevation of temperature—there being no apparent cause for such an attack. This attack may last some time—the patient suffering very severe pains in the pelvis—the evacuation of the bladder and rectum giving rise to exceedingly annoying sensations. Improvement takes place slowly, and the general condition never becomes satisfactory.

There are recurrent attacks of perimetritis, which are very characteristic. Usually, however, this form of perimetritis is distinguished by its chronic development—the commencement being often indicated by a frequent desire to void the urine. The patient complains of vague pains in the hypogastrium, incapacity to do any work requiring steady effort, and she has no pleasure in existence. Either diarrhœa or constipation is complained of. Dyspareunia is a not infrequent symptom in these cases; it is partly to be ascribed to the increase of the already existing sensibility in consequence of the hyperæmia evoked; but partly also to the traction exerted on the adhesions of the uterus. The nutrition of the patient suffers greatly; so that, in the language of Veit, we can speak of a cachexia gonorrhœa.

In the whole range of human experience, to me there hardly seems to be anything more affecting, more inexpressibly touching and full of sadness, than the fate of a virgin just united by the ties of marriage to a man still suffering with a chronic specific urethritis. Perhaps in the morning of life, bright and beautiful, she dons the bridal veil, bouyant with eager hope and fond anticipations of a happy married existence to be blessed with children. Alas! for such hopes and such anticipations! Infected by the first marital approaches, she acquires a virulent colpitis, or rather endocervicitis; anon a perimetritis, which confines her to bed, it may be for a longer or shorter time, from which she rises a physical wreck, never to know again the inestimable pleasure of healthy existence, and never to realize the greatest of all blessings to a true woman—the joy of maternity.

[TO BE CONTINUED.]

ART. III.—**Use of Fresh Milk in the Treatment of Acute Arsenical Poisoning.** By JOSEPH JONES, M. D., Visiting Physician to Charity Hospital; Professor of Chemistry and Clinical Medicine in the Medical Department of Tulane University of Louisiana; Honorary Fellow of the Medical Society of Virginia, etc., New Orleans, La.

During the past twenty-five years the author has been called upon in private practice to treat a large number of cases of poisoning by various agents, and has also been actively engaged in the investigation of some law cases and their prosecution before the courts of justice. He has also illustrated his lectures on toxicology before the medical classes of the Medical Department of the University of Louisiana (now Tulane) by numerous experiments with various poisons upon animals.

It would be foreign to our present purpose to enter into a detailed statement of the results of such labors and demonstrations; but we feel constrained to urge upon the attention of the medical profession the great value of fresh milk administered in large and often repeated doses in all cases of irritant poisonings. I have found fresh milk of especial value in the treatment of acute arsenical poisoning.

We will cite three instances illustrating the value of fresh milk in large quantities administered in *acute arsenical poisoning*.

CASES I.—An entire family, consisting of the father, mother, four children and a young man, was poisoned by arsenious acid thrown into the boiling pot of soup in the year 1874 in New Orleans. The excitation of vomiting and the use of large and repeated doses of fresh milk, followed by rest, and milk and lime water, resulted in the recovery of the seven individuals. The young man was the most strongly impressed, and suffered with suppression of the urinary excretion for about thirty-six hours. The scanty urine excreted at the end of this time yielded arsenic by the processes of Reinsch, and also was shown by chemical and microscopical analysis to contain albumen and granular casts. The entire surface of this young man was covered with a bright scarlet rash resembling that of scarlatina during the suppression of the action of the kidneys.

CASES II.—About the time of the outbreak of the memorable yellow fever epidemic of 1878, I was summoned at

night to visit a family residing near St. Charles street, Napoleon avenue, who were said to be suffering from symptoms of poison. I found the head of the house—a large man about 50 years of age—lying dead on the floor of the front parlor.

His wife, son and four servants were suffering with violent vomiting and cramps. Investigation showed that white arsenic, which had been purchased to destroy vermin and rats, had been used by accident in the place of white sugar in the preparation of pastry. The free use of fresh milk and milk and lime water resulted in the recovery of these remaining victims.

CASES III.—On the first day of June, 1882, I was summoned early in the morning to visit some members of the family of a neighbor who had been taken violently ill after drinking some *black coffee*. Examination of the premises showed that a large quantity of white arsenic (arsenious acid) had been placed in the coffee mill and ground up with the coffee. I immediately administered large quantities of fresh milk, followed by ipecac and warm water. Profuse and repeated vomitings were thus excited, and the stomachs were washed out with the warm milk and warm infusions of ipecac. As soon as the nausea and vomiting had ceased the bowels were opened with castor oil. The patients were then confined to bed and nourished with milk and lime water—three parts of fresh cow's milk to one part of lime water.

Although the patients suffered extreme agony, and were greatly prostrated from the poisonous and irritant effects of the arsenic, they one and all recovered.

The milk dilutes the poison, encloses it in its coagula, sheathes the inflamed surface of the mucous membrane, and when the stomach is capable of absorption, and digestion forms an aliment of the greatest value.

ART. IV.—*Lanoline in Blepharitis Marginalis—Negative Results.* By J. HERBERT CLAIBORNE, JR., M. D., New York.

During the past winter, Liebreich, of Berlin, introduced to the profession a new fat—*Lanoline*. It is obtained from the wool of sheep, as its name signifies, and possesses the peculiar property of being miscible with water. It is capable of taking up 100 parts of water, but separates from it rapidly on standing.

Owing to its miscibility with water, it was suggested as an excipient for the preparation of salves in skin diseases. Combined with crysophanic acid, it has been used with success in cases of favus.

Recently I have made extensive experimentation with lanoline in blepharitis marginalis. At first it was combined with the yellow oxide of mercury, in the proportion of two grains of the yellow oxide to one ounce of the excipient. Some of the patients complained of its stinging considerably on application, and one patient who had a corneal infiltration in addition to blepharitis, stated that on putting a little between the lids, the pain was quite severe and lasted some time. It was then prescribed pure for this patient, and in this form no pain or stinging followed its application. Two crops of hordeoma were developed under its use in one case, though I am constrained to say that the same patient had already had styas during the application of warm water. At the time that the styas appeared under the use of the lanoline, no warm applications were being made. There was no visible improvement in any case, either combined with the yellow oxide or alone, and the eye-lashes were invariably matted and stuck together by the salve, which seemed to cling quite closely.

There was no *uniform* complaint of stinging. Of two patients, one would almost invariably answer in the affirmative, the other in the negative.

From the above observations, the use of lanoline in blepharitis marginalis is without good effect, and as long as we possess cosmoline, vaseline and other excipients, its use is not to be advised.

130 *Lexington Ave.*

"I have a patient who had such an aggravated attack of rheumatism that I did not imagine any medicine or combination of medicines could afford relief. Prescribed TONGALINE, and within a week the improvement is such that I believe a continuance of its use will effect a radical cure."

WM. M. DODSON, M. D., Wet Glaize, Mo.

ART. V.—**A Clinical Lecture—(a) Fibroid Tumor of the Uterus; (b) Uterine Polypus—Removal.*** By WILLIAM GOODELL, M. D., Professor of Gynæcology University of Pennsylvania, etc., Philadelphia, Pa.

Gentlemen,—The first case that I bring before you is one for diagnosis. There are some points in the history which are a little peculiar; but although I have not yet examined her, I have, from the history which has been given me by her doctor, made up my mind as to the probable diagnosis.

Case I.—She is 44 years of age, married, has had eight children, the youngest of which is 3 years of age. Ever since the birth of the last child, she has had bearing-down feelings following the least exertion. The labor was an easy one. For the past five or six years, the abdomen has been enlarging, the increase in size being first noticed in the region of the right ovary. For the past three years menstruation has been very profuse.

As the enlargement has been going on for several years, it is unlikely that it is due to ovarian tumor; for ovarian cysts generally are of rapid growth. Again, ovarian tumors should not give rise to menorrhagia. The hæmorrhage and the slow growth of this tumor lead me to think that it is connected with the uterus—a fibroid tumor. The peculiarity of the case, if this diagnosis should prove correct, is the fact that this woman has borne a number of children. Fibroid tumors are, as a rule, found in old maids and barren wives. Women who have borne children have their own peculiar disorders—such as laceration of the cervix, laceration of the perineum and carcinoma of the cervix, lesions which do not affect sterile women. It is exceptional to find in a woman who has borne eight children, a tumor of this kind.

Let us now turn to the patient, first examining through the abdomen, and then by the vagina.

The first thing that we note is the presence of lineæ albicantes, which is a proof of former distension of the abdomen.

I do not say that these belly-scars are pathognomonic of

* Delivered at the Hospital of the University of Pennsylvania, September 17th, 1886. Reported by WILLIAM H. MORRISON, M. D.

pregnancy, but it is rare to find them as the result of anything else. They mean a swelling once, but now past and gone. When the abdomen is distended greatly as the result of ascites, it is usually from some serious organic disease, and the dropsy is not likely to go away. But pregnancy causes a temporary distension; hence, when you see the lineæ albicantes, you are morally certain that pregnancy has occurred.

Grasping the abdominal wall, I find that it contains a large quantity of fat.

This, as a rule, is not seen in ovarian tumors, which are characterized by loss of flesh.

On palpation, I detect a tumor extending to above the umbilicus, and apparently of the size of a foetal head.

One difficulty in the diagnosis of fibroid tumors is due to the fact that we have two varieties of these growths; one is a muscular tumor, or *myoma*, and soft, while the other is a fibroid tumor, a *fibro-myoma*, and hard. A soft myoma may give a sense of fluctuation, which will sometimes deceive the most careful examiner. On several occasions I have known the needle of the aspirator passed into such a growth under the impression that it was a cyst. I have done it myself.

The growth in this case gives a feeling of softness to the finger. Percussion over this tumor gives no positive results, for it is too deeply seated, and the mass of fat in front obscures the sound. The patient, however, complains of pains on percussion.

An ovarian tumor is usually free from pain. When pain attends an ovarian tumor, it comes not from the tumor itself, but from the pressure of the growth upon some nerve trunk. On the other hand, a tumor of the womb may be in itself painful, but usually it is not so. Tenderness is, however, indicative of implication of the uterus in the growth. We have to be careful, however, for there are no iron-clad rules for diagnosis, and the tenderness complained of may be merely in the skin, a condition of hyperæsthesia, or in an overlying bladder, or in a dislocated ovary.

One way of determining whether or not fluid is present, is to indent with the fingers one portion of the tumor, when,

if it be a cyst, there will be a corresponding bulging of the opposite pole. This cupping and bulging is, to my mind, pathognomonic of a cyst. In soft myomata, however, there is also a bulging, but not to the same marked extent; yet I have been deceived by it.

The nature of this growth can only be determined with exactness by examination per vaginam.

I find that the cervix has disappeared; it has been drawn up or lost in the tumor. There is a hole at the extremity of the vagina, and flush with it, which is the os uteri. I next pass the sound, and am able to feel its tip at the upper limit of the tumor above the umbilicus. Every movement of the tumor is communicated to the sound.

This proves that there is, at least, a close connection between the growth and the uterus. We must not be deceived by the sign, for an ovarian tumor may have such close attachments to the uterus that any movement of the tumor is also communicated to the sound. The sound gives a measurement of seven inches. This enlargement proves that the tumor is a part and parcel of the womb—viz., a myoma. From its size, I should say it had been in existence longer than is indicated by the patient's history. Some soft tumors grow very rapidly, but this is very rare, unless they are malignant—viz., sarcoma.

I wish you to note the complexion of this patient. She presents an appearance which I cannot distinguish from malarial cachexia, or from the carcinomatous cachexia. It is often impossible to tell the difference between the appearance produced by the loss of blood and that produced by carcinoma, or by malaria. In this case the hæmorrhage is very great, and the menses occur at intervals of three weeks, and sometimes dribble on indefinitely.

In the *treatment of fibroid tumors* of the uterus, the remedy *par excellence* is the combination of ammonium chloride in ten-grain doses, three times a day, with as much of the fluid extract of ergot as the woman can bear. In order to make the treatment as inexpensive as possible, I shall direct the patient to procure six drachms of chloride of ammonia, and dissolve it in a pint of water. Of this she will take a tablespoonful in a little water three times a day. She will

also take twenty drops of the fluid extract of ergot three times a day, if possible before meals. If this should cause too much pain, the dose will be lessened. If it upsets the stomach, she will take it after meals.

I shall direct her to report the result of this treatment in two weeks. If in two months there is no decided improvement, I shall recommend the removal of the ovaries—an operation which, in my hands, has never failed to put a stop to menstruation, and arrest the growth of the tumor.

As illustrating the effect of the treatment by ammonium chloride and ergot, I may state that in June, a lady, who had been bleeding excessively, presented herself at my office. She was 50 years of age, and had a fibroid tumor. She had been taking ergot for some time without benefit. I gave her the remedies just indicated. In July, she again came to see me, and I found that the uterus, which one month before was five inches long, now measured only four and one-half inches. I saw her again this morning, and the sound gave a measurement of only four inches—a diminution of one inch in the past three months. Her last period was the best she has had for years. This patient will probably be tided over the climacteric, after which the tumor will become smaller and smaller. I have, however, never known it to disappear wholly; but it then usually becomes innocent.

Case II.—UTERINE POLYPUS—REMOVAL.—In this case, there is some difficulty in diagnosis between a polypus and an inversion of the womb. I examined her carefully in my office, and decided we had to deal with a polypus; but, as she was very sensitive, the diagnosis was a little obscure; so I shall have to go over it again to day before attempting to remove the growth. For it would, indeed, be a great blunder to remove an inverted uterus for a polypus; yet it has been made, even by gynæcologists of prominence.

What is a polypus? It is a stalked tumor springing from the mucous surface of the womb. The stalk may be long, or so short as to be virtually absent.

There are several varieties of polypus, dependent on the stroma from which it springs. If it starts from the mucous membranes, it is a *mucous polypus*; if it owes its origin to the sub-mucous connective tissue, it is more dense in struc-

ture and constitutes a *fibroid polypus*; and if it first developes in the muscular tissue, it is *myomatous polypus*. Some of these polypi appear to be nothing more than retention cysts, due to distention of Nabothian follicles. These constitute *glandular polypi*.

Let me give you some points in regard to the differential *diagnosis between inversion of the uterus and polypus*: A polypus, being a stalked and foreign body, is not sensitive. A needle can be plunged into it, and the woman should feel no pain. On the other hand, the fundus of the womb is very sensitive, but there are exceptions to this rule; for, as I have before said, there are no hard and fast rules for diagnosis. Another point is, that the inverted womb usually forms only a small tumor, the empty womb being a small body, and a large mass is hardly likely to be produced by the inverted womb. It may, however, happen that a fibroid tumor is attached to an inverted womb, or is embedded in it, and this brings another element of uncertainty into this diagnosis. If a polypus is present, and the womb is not inverted, there must be a uterine cavity; so that if you find that the sound enters several inches, you may exclude inversion of the uterus. Again, if the womb is inverted, you will not find the fundus on bimanual examination. If there be partial inversion, the fundus will present an indentation, being cupped like the bottom of a bottle.

I shall now turn to the examination of the patient. Here we have a tumor about the size of the womb, projecting into the vagina. By bimanual examination, I feel behind the pubes what I take to be the fundus of the womb. I pass the sound and get a measurement of two-and-one-half inches. Occasionally the pedicle of the polypus, as the result of adhesive inflammation, becomes fastened to the cervix, so that it is impossible to introduce the sound. This greatly complicates a diagnosis; but in the present case, I think there is no doubt as to what we are dealing with.

The quickest way of removing these polypi is to twist them off. There is, of course, a possibility of twisting off some of the uterine tissue, but this is unlikely. I apply, as you see, the ordinary fenestrated polypus forceps, and with very little force, twist the pedicle. It gradually yields, and

I now remove the tumor, which is the size of a small apple. We now have a large raw surface in the womb, which must be disinfected. For this purpose, I shall employ a solution of bichloride of mercury ($\frac{1}{2000}$). As the cervix is widely dilated, I inject the solution directly into the cavity of the uterus.

Formerly I did not employ these antiseptic injections. I have removed a large number of polypi, and in only one instance has the patient died. I feel sure that if a disinfectant solution had been used in that case, the septicæmia would not have developed; but it occurred before the days of antiseptic treatment. This is the only fatal case that I have had after removal of a polypus or of a pedunculated fibroid. I am satisfied that a one to two-thousand solution of corrosive sublimate is much too strong for constant use. If I had to employ a mercurial injection every day, a strength of 1 to 4000 would be sufficient; but as in this case we shall use it only once, the stronger solution will do no harm.

A year ago a lady came to see me from the South. There was a very offensive smell from the vagina, which led me to suspect carcinoma. On examination, I found a fibroid tumor, undergoing necrotic degeneration. I carefully cleansed and disinfected the vagina and removed a tumor larger than the one removed to-day. A quantity of offensive fluid, which had accumulated behind the tumor in the uterine cavity at once escaped. I immediately washed out the womb and vagina with a solution of carbolic acid, but she had a sharp attack of septicæmia and erysipelas, as a result of the absorption of these poisonous matters. Had I used the bichloride of mercury solution, I think this would not have happened, but at that time I was prejudiced against corrosive sublimate. Since then I have become a convert to its use.

Directly after every labor taking place under my care, the vagina is syringed out with a 1 to 2000 solution of corrosive sublimate and a twenty-grain suppository of iodoform is introduced. In the case before us I shall insert two five-grain suppositories immediately after the douche.

Let me make a few general remarks on polypi. Frequently

when a woman complains of bleeding on exertion or after intercourse, the trouble is due to a very small polypus, not larger than a pea. You may not be able to detect it with the finger, for it may lie in the mouth of the womb and be pushed back into it before the finger, offering so little resistance that its presence is not appreciated. With the bivalve speculum, you discover it and can then twist it off with the polypus forceps. In order to prevent bleeding, the base should be cauterized with nitric acid or with nitrate of silver. As a rule, polypi are not discovered before they reach the size of a hickory nut.

These tumors may occupy one of three positions, either wholly within the vagina, or partly within the vagina and the womb, like the clapper of a bell; or the polypus is wholly within the cavity of the uterus.

In the first two varieties the polypus is readily removed. If the pedicle is too thick to be twisted off, the wire ecraseur should be used. Once in a while a neglected case is met with, in which the tumor is so large that it fills up and distends the whole vagina, and I have had cases in this amphitheatre in which I have found it necessary to deliver the polypus with the obstetric forceps. In these cases I have purposely inverted the womb, bringing the tumor outside, enucleating it with scissors and the fingers, and then restoring the womb to its proper position. Once, the tumor was so large that I had to make two lateral cuts in the vulva in order to save the perineum, which, however, in spite of them, was torn down to the splinctor. The woman was unmarried, and when she returned home the village crones raised such a buzz of scandal about her that I had to write for her a certificate of virginity.

If the womb cannot be inverted, the proper thing to do is to cut, with a pair of strong and curved scissors, the tumor off piece by piece at one sitting. Although these tumors cause so much bleeding, yet when they are cut in this way, the bleeding is not excessive. A large slice may be removed, and if there is much hemorrhage, vinegar may be injected. Then another portion is removed, and this is continued until the stalk is reached and the whole mass dis-

posed of. This should always be done at one sitting, for when the tumor is removed by successive operations, the danger of septicæmia is generally increased.

If there is a polypus within the womb, and the os is undilated, we cannot positively determine its presence without dilating the cervix. If, however, we find that the womb measures four inches or more, we may feel satisfied that it contains a foreign body. Under such circumstances, I dilate the canal with my uterine dilator, and introduce the polypus forceps. The forceps are then opened, and I often catch a polypus without knowing that it was there. Even if a polypus is not present, the forceps can do no harm, for it cannot pinch the uterine tissue. The polypus being caught, it is twisted off. Sometimes, on account of the narrowness of the canal, there is difficulty in removing the polypus after it is detached, and occasionally I have had to nick the os in order to get the tumor out.

If the tumor is a large one, situated high up, and the pedicle is so short and thick, that if an attempt to twist the polypus off be made, there would be danger of injuring the uterus itself, the proper plan is to remove the polypus with the wire ecraseur. The mode of procedure is as follows: The anterior lip of the uterus is seized with the volsella forceps, while an assistant presses on the fundus, forcing it down. The tumor is then grasped with the polypus forceps, and the volsella, to make room, is removed. The loop of the ecraseur is then slipped over the handles of the polypus forceps and carried up to the tumor, over which the wire is then gradually coaxed up to the stalk.

It may happen that the traction on the tumor has partly inverted the womb. In that case, after the wire has been placed in position, the polypus is pushed upwards, thus restoring the womb, and the wire is then tightened. I do not use the annealed wire in the ecraseur, but always the fine piano wire of the upper notes.

There is one point with reference to the method of attaching the wires which it is well to bear in mind. I fasten one end of the wire to the travelling button and the other to the fixed handle of the instrument. By so doing, less force is

needed, and the wire is less likely to break, for then one side only of the wire moves, and we obtain a half-cutting as well as a half-crushing motion. If there is any bleeding, vinegar may be injected. This is also a good disinfectant. But I now always complete the operation by the injection of the bichloride of mercury solution, one part to two thousand.

500 N. 20th St.

ART. VI.—**Puerperal Eclampsia.*** By H. M. CLARKSON, A. M.; M. D., Haymarket, Va.

In all the wide range of clinical experience, the care of a parturient patient, in a convulsive paroxysm is, perhaps, the most appalling of emergencies. "A woman * * * is in travail," and "hath sorrow, because her hour has come, but * * * she is delivered of the child," and "she remembereth no more the anguish, for joy, that a man is born into the world." It is "the heaviness that endureth for a night, and the joy that cometh in the morning." The apartment so lately the scene of anxiety, seems now the abode of a great happiness. The gratified friends, in face of the doctor's remonstrances, are bent upon crowning him with a meed of praise. He is beginning, in spite of himself, to feel something of the hero, when a quick movement of his patient's head upon her pillow startles his attention. With all her senses on the *qui vive*, she has recognized a familiar foot step on the stair. It is the father of her boy, who returning from a far off journey, is eagerly approaching her with a proffered kiss of congratulation.

This double joy is greater than she can bear. Her lips tremble, but are unable to speak her welcome. Suddenly there is a suffusion of the whole face, and an involuntary tonic contraction of its muscles. The mouth is drawn to one side. The beautiful eyes are rolled back under the quivering and half closed lids, exposing only the pearly

* Read before the Northeast Virginia Medical Society.

sclerotic. The temporal and masseter muscles clinch the teeth, lacerating the protruded tongue. From the twitching mouth issues a blood-tinged and frothy saliva. The shapely throat seems to swell. The carotids beat immoderately, and the jugulars are prominent. All the muscles of the body are thrown alternately into violent spasm and sudden relaxation, causing powerful contortions. The comely arms and rounded limbs are moved back and forward, with a clonic jerk, and the dazed husband holds in his arms, not the yielding form of a conscious wife and mother, but the convulsed body of an epileptic.

This, gentlemen, is no overdrawn picture. It is taken from life, and is true to nature. Most of you are familiar with it, if not in its details, at least, in its most salient features. Such are the symptoms which you will note in your graver cases of puerperal eclampsia, variously modified and moderated according to the condition of system, and the type of eclampsia. But, why this sudden transition, this wonderful transmutation, this marvelous shifting of scene? Why this startling thunder clap from the midst of a sky that was clear?

The whole subject of the causation of this pathological condition is yet *terra incognita*, upon which I shall not venture until more scientific explorers shall have pointed out definite paths, converging to some tangible and solid truth. I have neither time nor talent for such investigation, and will content myself with calling attention to some of the discrepancies in the teachings of the searchers of scientific truth.

Dr. Bright, in 1827, pointed out the co-existence of albuminuria with certain pathological conditions of the kidney; yet, several times since, has it been shown that albumen is not so invariably in the urine in such cases as was formerly thought.

Lever, in 1843, found albuminuria associated with parturient eclampsia, and insisted that it always preceded the convulsion; and later Sir James Y. Simpson declared these convulsions to be essentially uræmic in their nature; but Braxton Hicks has proved albuminuria, in several instances,

to be the sequel, and not the antecedent of the seizure. In regard to the frequency of albuminuria in pregnancy, hear the varying witnesses. Abeille finds it in one out of every ten eniente women, whilst Blot, Petit, Hypolett and Litzman find it in 20 per cent. Noeggerath, of New York puts it at 13 per cent. whilst several of his confrères, of the New York Obstetrical Society declare it to be 30 per cent. What relation pregnancy may bear to Bright's disease, or to its pathogenic cause, seems still involved in uncertainty. Many able writers attribute the changes in the kidneys to pressure of the enlarged and gravid uterus on the renal veins, and support their belief, very plausibly, on the several grounds, that pregnancy nephritis proper begins usually not before the fifth month; that it originates mainly in primiparæ, in whom the womb pressure is greatest; that it complicates twin pregnancy rather than single; and that, after parturition, anasarca and albuminuria rapidly subside. (Ellegood, of Delaware). This is good inference, and yet, "Bartels has shown that the renal veins occupy such a position, as secures them against pressure," and since so many pregnant women escape albuminuria, and so much more pressure is exerted, in the same place by tumours (ovarian, e. g.,) it seems, at least, *not unlikely*, that some peculiar predisposition conduces to the disease. "It is not claimed," says S. M. Hamilton, "that albuminuria may not be the cause of this frightful ailment *sometimes*, but he who bases his treatment upon that hypothesis in every albuminuria pregnancy will make a most stupid blunder." The practical Goodell believes that "no single theory yet advanced will explain all the phenomena of the parturient convulsion; and modestly suggests, that it may be due to some morbid element in the blood, co-operating with the great nervous irritability peculiar to the puerperal condition." Like every other subject still in obscurity, the great number of supposed causes is, itself, proof of the uncertainty surrounding it. Therefore, since so much doubt hangs around the etiology and nature of puerperal eclampsia, since the suggestions in regard thereto are confusing, many and conflicting, *let us*, premising that the causes may be many, rather than one, base our

treatment upon cases of actual occurrence—one fact being worth more than a thousand theories.

I cannot claim that my experience with this disease has been considerable, and yet, gentlemen, when I learn that Dr. Johnson, of the Royal Obstetric Hospital, Dublin, in a whole year reports only four cases; that Dr. Henry Beates, a distinguished member of the Obstetrical Society of Philadelphia, has met with but two instances of the disease; that Dr. Wm. Sigsbee, of Illinois, in twenty-five years, in several hundred cases of midwifery, saw only four; that Dr. J. W. Hamilton, of Brooklyn, in a like number of years, encountered only two, and stumbled on them *fifteen years apart*; and that the veteran, Dr. Hiram Carson, of Pennsylvania, in 2,387 labors, has had only nine cases of eclampsia—when I reflect upon these statements, it does not require much modesty to admit, that in a practice of not quite a quarter of a century, and, in point of numbers comparing favorably with that of the average country physician, I can recall nor more than four or five cases of this grave complication of child-birth. And yet, these cases were typical of almost as many different conditions of system.

My own inclination is, to classify the variations of puerperal eclampsia, as follows: 1st. *The hysteriform*, the effect of uterine irritation on a nervous temperament, requiring little treatment, or no more than a case of non-puerperal hysteria. 2nd. *The epileptiform*, caused by spinal, or cerebral irritation, or congestion, calling for active prophylactic and remedial treatment—this variety embracing also the so-called *apoplectiform*, a more sthenic and more pronounced, possibly a more advanced degree of the same, although I do not deny, that it may originate as apoplexy, *a priori*. 3rd. *The uræmic*, which may, more properly, be considered as a distinct condition, complicating either of the others, due to albuminuria, and requiring, with some modification, the treatment of the convulsions of Bright's disease. But to my cases.

CASE I.—Mary A., aged 17 years., unmarried primipara. Housekeeper to widower. Saw her first on September, 16th. Was requested by her mother to “give her something, to

bring back her courses." Found her pale, anæmic, nervous and tearful. Suspected pregnancy, and accused her of it.

She pleaded guilty to criminality with her employer. Gave her a nervine * * * In due time, was summoned to her again. Found her entirely unconscious, with face pale, decubitus dorsal and opisthotonic, and limbs rigidly tonic. Had given birth to a living child three days previously, and had had a convulsion on the day following parturition, since which time she had been in the condition in which I saw her. Diagnosed *puerperal hysteriform convulsions*. Administered a stimulating and antispasmodic enema of assa-fœtida and turpentine. Used warm applications over stomach and warm frictions over back. Dashing cold water on face provoked neither sound nor movement. Remedies could not be given by mouth, on account of trismus. Having no chloral hydrate, sent for it, and meanwhile injected bromide of potassium by rectum. On procuring chloral, gave grs. xxx, of it with grs. xl, of bromide of potassium by rectum, and rested on my oars. At the end of some hours, whilst slapping her face with my wet palm, she opened her eyes, and said, "Psha! kiss my foot! what are you doing?" "Getting you well enough to see the baby," I replied. "What baby," she asked. "Your baby." "You go to hell," she said, "I've got no baby." Glad to hear her say *anything*, and thinking that her polite suggestion was intended for her paramour, with whom she had been quarrelling at the moment of the eclamptic seizure, I did not deem it necessary to reply, but continued the chloral-bromide treatment *per orem*, gradually lengthening the intervals of the dosing. She had no more puerperal trouble. Put her on chalybeate treatment. She made a good getting up, but her memory, in connection with the birth of her child, was entirely obliterated.

CASE II.—Mrs. E., aged 22, married, primipara. Was summoned to her in labor, at 10 o'clock, P. M. Child born with very little trouble at 2 A. M. Left her at 5 A. M., at which time she complained of considerable cephalalgia. Having no bromide with me, I left for my office, two miles distant, requesting her husband to send at earliest convenience to me for it. In a little while the messenger came, but begged me to come with him, as Mrs. E. was "having fits." Obeyed immediately. Found her insensible. Another paroxysm occurred directly. Her features became distorted, every muscle of her face being rapidly jerked. Her countenance was livid, the lips purple, the eyeballs prominent,

the breathing stertorous. In a couple of minutes, the convulsion had passed away, leaving her comatose. Diagnosed *puerperal epileptiform convulsions*. I took a free dash of blood from the median basilic; threw into the rectum an assa-fœtida mixture, and followed it soon with chloral and bromide, in a vehicle of milk and yolk of egg. Removed her hair and applied cold water to her scalp. As soon as I could, continued the chloral-bromide. Catheterism was performed. She made a good recovery.

CASE III.—Called from a Christmas dinner to Mrs. H., aged 20, primipara. Had been confined on Christmas Eve, attended by an ignorant midwife. After the first complaint of cephalalgia, she had been drenched by her attendant with more than a half pint of whiskey. She was, in twenty hours after labor, profoundly comatose, in an uninterrupted tonic spasm. Questioned myself—was it eclampsia, or alcoholism? Had had three or four convulsions prior to her lapse into continued stupor. Had known her, formerly, as a woman of fine physique, but with tendency to obesity. Her neck was thick and short, cheeks red, plethora marked. Legs in later months of pregnancy had been quite œdematous, and there had been some general anasarca. Abdomen very tympanitic. Diagnosed *puerperal apoplectiform convulsions*. Gave her, in quick succession, two enemata of turpentine in olive oil, without any effect upon the tympanitic distension, or profoundness of the coma. Again administered by the rectum, four drops croton oil in olive oil; but this produced no fœcal dejection. Meanwhile, as the bend of the elbow was anasarcous and thickly cushioned with adipose tissue. I discarded my thumb-lancet, and with a spring lancet, took between 16 and 20 ounces of blood, but I did not think that the result was a test of what might have been accomplished, had I been earlier in charge. She died before midnight.

CASE IV.—Was called in consultation with her regular attendant to see Mrs. S., a married multipara, in 9th month of fourth pregnancy, aged 32 years; agreed with her physician in his diagnosis of uræmic convulsions. Considerable anasarca, chiefly of extremities, and external genitals. Had had several convulsions, none very severe. Found her physician giving chloral and bromide and digitalis. Advised an occasional continuance of the same *pro re nata*, until labor should set in. Especially approved the chloral treatment, and suggested the use of chloral and chloroform *during the labor*. They were both administered. The convulsions had

ceased before parturition, and never recommenced. She was delivered of twins. Easy labor. Nothing to mar her getting up.

Observe, gentlemen, that the above are almost typical cases of the four varieties, as classified in the preceding context; also, that three of the four were primipara (about the usual percentage), and the fourth a *twin* pregnancy. All but the last were *post partum* convulsions. In none of these cases had my services been *previously* engaged. This will account for the absence of any prophylactic treatment.*

Pardon me for pausing here to say in connection with *prophylaxis*, that I make it a rule, to insist upon being always pre-engaged for the conduct of a case of labor. In this way, I manage to inquire into the health of my patient during pregnancy. And on the first appearance of persistent cephalic trouble, denoted by drowsiness, perversion of vision, noises, etc., I administer bromide of potassium, and if there is œdema of the extremities or labia externa, I combine with it the chloral hydrate, and also advise a milk diet.

Dr. Tarniér, chief physician of La Maternité de Paris, examines the urine of all of his patients who are enciente, and puts the albuminuric cases on "two pints of milk, and only two meals on the first day, increasing the former and diminishing the latter, until the fourth day when the patient gets seven pints of milk, and no other food or drink." He claims, that the albumen rapidly disappears from the urine in from eight to eleven days. Dr. Noeggerath said in the New York Obstetrical Society (September, 1878) that there was only one reliable remedy in pregnancy with albuminuria, *Tarniér's treatment by skimmed milk*. "He had seen albumen diminish, considerably, in three days under its use."

In the *Gazette des Hopitaux*, May 14th, 1881, "M. Chantrenil records a number of dropsical cases, with albuminuria in the latter months of pregnancy, in which the milk diet evidently prevented puerperal eclampsia." Noeggerath, also, referred to that property of chloral hydrate which causes the albumen to disappear from the urine in albumi-

*Since writing the above, strange to say, I have had two more cases of puerperal convulsions, both in negresses, both of the hysteriform variety, and one of them a complication of twin pregnancy, in a primipara.

nuria—the albumen re-appearing as often as the choral is withdrawn. He thinks the albuminuria of pregnancy is probably different from that which causes dropsical effusion; and that perhaps chloral has some influence in changing the character of the albumen. Dr. William B. Atkinson speaks of chloral as “almost a specific, and rarely failing to counteract the convulsive tendency.” Surely, in the light of such examples, is it not our bounden duty to examine the urine of our pregnant patients, suffering from any disorder, especially, where there is œdema, or a tendency to it. So much for prophylactic treatment.

And now as to the *treatment in general*.

The scientific treatment of any disease consists in discovering the cause and endeavoring to remove it. This is also common sense. But when the cause cannot be determined, “we must simply use those remedies which, in the hands of the most experienced physicians, have yielded the most successful results.”

Venesection.—If there be any clinical contingency calling for a resort to this so-called “lost art,” it is a case of sthenic puerperal eclampsia, in the person of a young and plethoric woman, with hot head, flushed face, throbbing carotids, bounding pulse, and other symptoms of cerebral hyperæmia. Without venturing with Hiram Carson (Penna.) and Isaac Scott (Va.), to abstract a gallon of blood in this disease, I believe the best possible chance out of such symptoms is venesection, *pro re nata*. When you bleed, bleed early, and never in excess. Venesection may relieve the vascular tension of the brain and kidneys; but remember that whilst, in bleeding, you are removing the watery element of the blood you are also abstracting a proportionate amount of blood corpuscles, so necessary to the maintenance of the patient. Therefore bleed, if you have to bleed at all, as a means of temporary relief to the brain and kidneys, and then avail yourself of other treatment, with a view to rapid results. (It is hardly necessary to say that venesection would be hurtful always in the hysteriform and anæmic conditions, and perhaps generally in the uræmic). Having controlled the immediate convulsion, endeavor to

prevent a recurrence, and for this purpose the best remedy is *chloroform*.

Chloroform.—There is no necessity for complete anæsthesia, but give enough to control the convulsion. Remember that “chloroform sometimes stops the convulsions, frequently retards them, but that it is not curative. Chloroform is only an expedient to procure a cessation of the convulsions till the other treatment acts.” (Athill, *Dub. Obs. Soc.*) Bear in mind that, ordinarily, the convulsions are rythmical, occurring at regular intervals, unless their order be broken by treatment, or some change takes place. Taking advantage of this, do not keep your patient continually under the anæsthetic influence, but watch the clock, and when the expected moment approaches, slightly anticipate the time, etherize her fully, and keep her so until the storm is over, then discontinue until the next expected time—very much as we are in the habit of etherizing the parturient patient, in reference to the rythmical return of uterine contractions. When you have broken the order of their regularity still watch for the least sign of returning restlessness, staring, etc., and renew the chloroform. (Jessup, N. Y.) Dr. Barnes advises that all manipulations, such as vaginal examinations, rupture of the membranes, and catheterism should be done during the anæsthesia, when once it has been induced, because of the entire surface of the body being hyperæsthetic—this condition itself contributing to the convulsive tendency. Prof. Walthen (Louisville, Ky.) suggests that, after having once produced anæsthesia, you should give some remedy that is more pleasing and lasting in its effects, and nothing more fully meets this double indication than full doses of *hydrate of chloral*.

Chloral-hydrate.—It would be difficult to estimate too highly the worth of this remedy, whether it be used for controlling or for aborting puerperal eclampsia. Every day the testimony in favor of this article, as an effectual remedy against this disease, is accumulating. Its value, as a hypnotic, has long been recognized, but as an anæsthetic, especially in the disease under consideration, it is no less conspicuous. Dr. Chouppé, of large experience, (*Gazette Medicale*) says, “of

all the means we possess the hydrate is the most reliable for treating this disease," and advises its use "wherever a woman, exhibiting albuminuria and œdema, complains of headache, ringing in the ears, hallucination of vision, restlessness, cramps, or vague pains in the limbs." Hugh Thomas, England, regards it as the *sine qua non* in puerperal eclampsia, and, as already stated, Dr. Atkinson calls it "almost a specific." M. Dujardin-Beaumetz thinks it can be given during longer periods than chloroform, without causing dangerous symptoms—an indispensable condition not only in combating convulsive attacks, as in eclampsia, but in preventing their return; and he quotes Martin's views in support of the powerful diaphoretic qualities of the drug. Chloral has the advantage over opium in not disturbing digestion, in not producing constipation, nausea, vertigo, etc. M. Lambert declares in favor of chloral as an excellent means of opposing puerperal eclampsia. The effects of chloral continue after parturition, and so secures that repose so much needed. In excess, it excites the cerebro-spinal system, and I have seen it provoke delirium, but its effects are transitory and not dangerous. It is more easily administered than chloroform, and, unlike chloroform, it can be given when trismus is present and during the paroxysm. It is generally advised to give it in large doses in the attack, but as a preventive, in smaller. I, myself, never attend any labor without having it at hand; and were it not foreign to this paper, I could relate instance after instance of its good effect in allaying nervousness, anxiety, in producing slumber and rest between the pains, in removing headache, in regulating so-called "false pains," in strengthening inefficient pains, in hastening dilatation in after-pains, etc., etc. Ordinarily I find ten grains every fifteen minutes, combined with twenty grains of potassium bromide, amply sufficient. In puerperal eclampsia it is sometimes given hypodermically, ten grains in 100 drops of water. But *cui bono*? when it can be so easily thrown into the rectum, which method makes it also a local anodyne to the uterus; and since the patient is generally unconscious from coma, or artificial anæsthesia, there can be no objection on the ground of modesty. As the

patient is recovering, it may be more convenient to give it *per orem*.

Morphia.—Opiate preparations, owing to the condition of the stomach in this disease, are not absorbed sufficiently rapidly to be of timely service [McFarlane]; but morphia, hypodermically, is often resorted to for its apparent efficiency. And yet this way of administering it is not without dangers to the child in utero; at least, if such men as A. J. C. Skene, Gillette, and Gaillard Thomas, of New York, are to be credited. Says the former, "I firmly believe that same strength of hypodermic injections of morphia are exceedingly dangerous to the child, while they may be of the highest value to the mother;" and the latter has "often seen opium narcotism affecting the child when the hypodermic syringe was used ante-partum, even when no convulsion existed," and adds, that "such use of morphia is always dangerous to the child; but in convulsions even this fact must be overlooked in the interest of the mother." But Barker, Peaslee, Lusk, Storer, and Glisan differ from these teachers. Of course, in post-partum eclampsia, their objection falls to the ground.

Veratrum viride is very highly recommended in Norwood's doses, and even in larger; and is also used hypodermically in quantities calculated to reduce the pulse to 60 or 80 beats per minute.

Muriate of pilocarpin, in hypodermic injections of $\frac{1}{3}$ d grain, repeated in six hours, to produce diaphoresis, had, at one time, a respectable following, but its advocates seem to be dropping off, and some are declaring against it.

Jaborandi is extolled in this disease. For relieving the eclamptic attack by profuse diaphoresis, Dr. Gillette, of N. Y. Obs. Soc., speaks very favorably of fluid extract of jaborandi in $\frac{1}{2}$ drachm doses, while several others recommend it in any stage of pregnancy nephritis.

The hot pack and baths, in speaking of diaphoresis, must not be overlooked. Dr. C. Breuss (*Archiv. f. Gyn.*), puts his patient in a hot bath 40° to 45° C., for half an hour, and then keeps her wrapped in blankets for two or three hours. Dr. Keely, in the *Lancet*, favors vapor baths in bed, and if the patient can be seated puts her in a cane chair with a

blanket over her, and a spirit lamp, producing vapor, beneath her.

Each of the *bromides* may be used interchangeably one for the other. Even the praises of the *assafœtida mixture* are sounded by some; and, I believe, from my own experience, it is not to be despised, certainly not in the hysteriform variety of puerperal eclampsia.

To sum up briefly: When, in the lying-in-chamber, the awful complication of eclampsia comes upon you, as it occasionally will, with the suddenness of the earthquake, be cool. Encourage the attendants. Enforce quiet. Restrain your patient sufficiently to keep her from bodily injury. Place a cork between her teeth. Remembering, that the whole surface of the body is in a condition of hyperæsthesia, make as few vaginal examinations as possible. Use the catheter *only if there is distention of the bladder*. At no time yield to the common suggestion to apply blisters to the nucha, or cataplasms to the calves. Evacuate the bowels by stimulating enemata. If there has been constipation, purge by calomel or croton oil. Apply cold to the head, and remove hair if necessary. Mustard baths to the feet. Do not dash cold water into the face. It *may* be done in hysteria; in syncope it is undoubtedly beneficial, but in *eclampsia*, Barnes says, "he has seen it provoke a fit and knows it to be decidedly injurious." Give enemata of chloral and a bromide. Bleed only in decided plethora to relieve cerebral hyperæmia. Etherize, but not completely, except during a paroxysm. Keep your hands off your patient save when necessary to perform some service, *and then*, if possible, do what is to be done under the cover of anæsthesia. The spasm over, prepare to empty the uterus. Puncture the membranes and leave the rest to nature. If nature refuses to respond, slowly dilate the os. Do not forget that the fingers in cone shape are the best dilators, and chloral their best assistant. Dilatation effected, deliver with the forceps for the head, or, in breach cases, by the feet. The uterus emptied, all unfavorable symptoms will vanish; if not, continue the chloral, the bromides, etc., as needed.

ART. VII.—**Grave Importance of an Early and Accurate Diagnosis when Eye-Sight is Failing.** By JOSEPH A. WHITE, A. M., M. D., Senior Surgeon of the Richmond Eye, Ear and Throat Infirmary, Richmond, Va.

What I mean by failing sight is, when “distant vision,” or “vision for objects at a distance,” becomes sensibly impaired, or falls below what it usually has been for the person afflicted, without any *manifest inflammatory trouble* of the eyes. Ordinary inflammatory diseases of the conjunctiva, cornea, iris, etc., sometimes impair vision, either temporarily or permanently, but these affections can be diagnosed and treated by the majority of physicians in these days. But when no inflammation is present; when, with a perfectly normal looking eye, the patient complains of impaired vision for objects ordinarily perfectly distinct to him or her, the determination of the cause of such impaired vision becomes a serious question. Whether the patient shall apply *at once* to a specialist for treatment, or whether he shall wait to see what *time* will do for him, must be decided; and frequently such decision involves the future of his eyesight for weal or woe, for in many cases early and prompt treatment is the only loop-hole to escape from permanent blindness. Again and again, patients come to the oculist in the last stages of some intra-ocular trouble, who have been treated for everything in the world except the right thing, and who would have recovered either very useful or perfect vision by rational early treatment of their disease.

In the last twelve months I have had patients sent to me with letters of introduction from the attending physicians, giving the history of the case and a diagnosis totally at variance with the history. I find that the majority of such letters have referred the cause of the impaired vision either to “lens changes” (cataract), or to the optical defects from age. Whilst advancing years bring a visual defect for *near* vision, such as reading, etc., that requires glasses to correct, it does not impair *distant* vision until about 70 years of age, and then only slightly. If physicians would remember this, this error in their calculations would be barred out.

Again, whilst "cataract" is extremely common, *optic nerve lesions*, including *glaucoma*, are very nearly, if not quite, as frequently met with, and herein lies the gravity of a mistake in diagnosis. If the case is one of "cataract," it is useless to send it to an oculist until the cataract is perfectly or very nearly matured, as an operation ought not to be performed until that stage is reached. On the other hand, if it is one of *optic nerve trouble* or *glaucoma*, the earlier proper treatment is instituted the better, because delay or procrastination only insures irreparable injury to the eyesight, whilst energetic treatment or operative interference in the first stage of these troubles will, in the majority of cases, arrest the disease.

The diagnosis between *lens changes* and deeper seated lesions of the eye is a matter of daily routine to the specialist, and therefore comparatively easy, but I can easily see the great difficulty of such a differentiation to a physician, however accomplished in his profession, if unacquainted with the use of the ophthalmoscope. For the guidance of these gentlemen, let me call their attention to a few points of difference that may enable them to decide this question:

Whilst impaired vision is the common symptom to which the physician's attention is called, the mode of impairment is very different in these troubles. In *commencing cataract*, hazy vision is complained of, and the patient cannot get suitable glasses; but the "*field of vision*" is not at all impaired, *i. e.*, with the eye fixed on one object at ten or twelve inches it can distinguish any other object held by the examiner when moved to right or left, up or down, at a considerable distance from the object fixed by the eye. For sake of comparison, the examiner can test his own field and approximate a normal standard from his results.

In *optic nerve troubles* and in *glaucoma*, on the other hand, the "*field*" is always more or less impaired. In "*glaucoma*," the inner field goes first; then the upper, then the lower, leaving only the outer field. In *optic nerve trouble*, with a tendency to atrophy, the outer field is usually first impaired. This test is easy and usually satisfactory.

Again, in cataract the *sense of colors* and the field for

colors remains perfect, whilst in glaucoma the color field becomes more contracted than the field for light, and in optic nerve disease, this defect is still more marked, the ability to distinguish green going first, then red, etc.

In *cataract* the patient usually sees better in a subdued light, whilst in *optic nerve defects*, better light than usual is required for clear vision.

In many cases of glaucoma we have intermittent inflammatory attacks, with or without neuralgic pain, that are a great aid to diagnosis; but some cases, from beginning to end, give no such symptom to help us.

The appearance of the pupil is not reliable, because, although under 30 or 35 years of age, the pupil is perfectly black, after that time it frequently has a grayish reflex, that may be deceptive in leading to a diagnosis of cataract. The age of the patient is of some slight assistance, as glaucoma rarely appears before 40 years of age, and the majority of lens changes not before 50. It is true that optic nerve lesions and atrophy of the nerve occur at all ages; but in youth they are attributable usually to pronounced brain troubles, whilst in adult life, when they are most common, they appear without any prominent symptoms of constitutional cause, being dependent upon obscure brain changes, renal troubles, syphilis, amenorrhœa, anæmia, alcohol, tobacco, etc. The grave importance to practicing physicians of this subject may be demonstrated by a reference to two cases I have very recently seen, as examples of many such that have come under my observation. Last winter I received a letter from a physician, saying he had a case losing his sight from cataract, and that he desired me to operate on him, provided I did not charge too large a fee; otherwise, as the patient was a man of very moderate means, he would undertake the operation himself, as he had had some experience in operating for cataract. My reply urged him to send the patient on, as I would make the fee satisfactory, and he then notified me that the cataract was hardly ripe enough for extraction. A month or so after the patient came on, being alarmed by his rapidly decreasing vision, and I found him with a *low grade optic neuritis*, vision only $\frac{5}{200}$, or $\frac{1}{10}$ of

normal, the visual field very contracted, the color sense much impaired, and the *lens perfectly clear*. From his history, I attributed the trouble to alcohol and tobacco. Energetic treatment with total abstinence from both poisons has restored his vision. In this case, had he not decided to consult an oculist when he did, and if he had waited for the blindness indicative of a mature cataract, his sight would have been hopelessly destroyed.

Another case seen about one month ago from Southwest Virginia, who came to see if his cataract were sufficiently ripe for operation, I found to be "glaucoma," with vision so much impaired that it is almost useless to operate on him at all, the *visual fields* being nearly entirely extinguished, and the slight central vision remaining hardly sufficient to enable him to go about alone. This latter is a very sad case, as he has a large family dependent on him, and an early operation would have saved his vision.

When a physician is not thoroughly satisfied from all available tests that his diagnosis is accurate, it is much better for such patients to make an apparently useless trip to consult an oculist than to take the chances of waiting for the developments in his case, as such waiting may result in permanent blindness, and by such a consultation the physician is relieved of the grave responsibility which he otherwise assumes in such cases.

410 *E. Grace St.*

ART. VIII.—**Thalamic Epilepsy.** WILLIAM A. HAMMOND, M. D., Surgeon-General U. S. Army (Retired List); Professor of Diseases of the Mind and Nervous System in the New York Post-Graduate Medical School and Hospital, etc., New York, N. Y.

Somewhat more than six years ago I read before the New York Neurological Association a paper on the above named subject. The discussion that followed was thorough, and was participated in by many of the most eminent members of the Society. Abroad, the memoir attracted much atten-

tion; and while the theories therein enunciated were not generally accepted as correct, it was uniformly admitted that I had called attention to an important variety of epilepsy that, previously to the publication of my observations, had been almost, if not entirely, overlooked.

Since then, many additional cases have come under my notice, and have served to strengthen the opinion I then advanced—that there is a form of epileptic seizure the manifestations of which are altogether *mental*, and in which therefore the muscular system does not participate. Cases of the kind to which I refer have either been regarded as something entirely distinct from epilepsy, or the characteristic phenomena have been overlooked, or they have been merged into a general description, with little stress laid upon them.

Let me, before describing the type in question, invite attention to the classification of epilepsies as given by Dr. Hughlings Jackson, one of the latest writers on the subject. This writer, who cannot be accused of overlooking any form of the disease that had ever come under his observation, describes six varieties as embracing all those known to him. These, briefly stated, are as follows:

1. A sudden and temporary stench in the nostrils, with transient unconsciousness.
2. A sudden and temporary development of blue vision.
3. A spasm of the right side of the face, with stoppage of speech.
4. A tingling of the index finger and thumb, followed by spasm of the hand and forearm.
5. A convulsion, almost instantly universal, with immediate loss of consciousness.
6. Certain vertiginous attacks.

As is seen, Dr. Jackson does not make loss of consciousness an essential feature of the epileptic paroxysm, and this fact is still more apparent from his reiterated assertions, not only throughout the paper from which I have quoted, but in other contributions he has made to our knowledge of epilepsy. He defines the disease as “an occasional, sudden, and rapid discharge of gray matter of some part of the brain.” A bad definition, certainly; but I do not quote it

now to criticise it, further than to call attention to the fact that the element of unconsciousness is not included in its terms. It excludes also, I may remark in passing, those remarkable seizures, evidently epileptic, characterized by states of consciousness different from that which is normal to the individual, and which may last for days, or weeks, or months, and in which there is neither vertigo nor muscular spasms.

The more familiar I become with epilepsy and epileptiform phenomena, the more I am convinced that there is no true epilepsy without unconsciousness, or at least a state of consciousness, of which the affected person has no recollection when the paroxysm has passed. If we take out this condition, we have a hundred or more trifling symptoms occurring daily in individuals in good health, which never pass into any more highly developed state, any one of which, according to Dr. Hughlings Jackson, constitutes a disease which all mankind regard as of terrible import. The tendency of all epilepsies of mild type is to pass into others of more severe character, and some of the forms mentioned by Dr. Jackson never evince the slightest disposition towards this advance.

Thus, I have repeatedly had patients under my charge who had at times been the subjects of tingling of the index finger, thumb and other fingers, followed by spasmodic movements of certain muscles of the forearm and arm, and who, not having unconsciousness, I have not considered to be affected with epilepsy, and in whom cures resulted without there being any more severe epileptoid symptoms. I should be very sorry to regard every patient that I have seen who had occasionally had "a sudden and temporary development of blue vision" as being the victim of epilepsy, for I have seen many such in whom there was no reason to suspect the existence of this terrible malady, and in whom such a symptom was without other apparent significance than as indicating a disordered stomach. When this was remedied, the blue visional paroxysms disappeared without further treatment—often to return when a like cause was brought into operation.

In all epilepsies, I should regard loss of consciousness, or

the abnormality of which I have spoken, as the essential phenomenon, without which, in fact, there is no epilepsy. The other symptoms are the characteristic features—those which constitute the differentiations—vertigo, convulsions, sensory disturbances, mania and other psychical manifestations, etc.

It is not my purpose at this time to state the reasons which induce me to think that the form of epilepsy I am about to describe has its morbid anatomical seat in the optic thalamus. For the full discussion of that point I must refer to my original paper, published in the *Neurological Contributions*, No. 3, 1881. That it is a form of epilepsy will, I think, be admitted, from the consideration of the very interesting case which I now adduce. In my original monograph, above referred to, I cited at length two of the five cases that, up to that time, had come under my observation. The present is one of several others that since that time have occurred in my practice. In all essential features they do not differ from the one now adduced:

Mr. J. B., silk manufacturer, consulted me March 7th, 1886, for what was supposed by himself and friends to be a form of mental derangement. For several years past, he had suffered almost daily from hallucinations of sight, followed by unconsciousness lasting generally two or three minutes, but occasionally extending to a duration of five minutes. These perceptive disturbances came on at various periods of the day, and oftentimes at night, at which latter times he was awakened by them; but there was not at any time the slightest muscular spasm or convulsion, nor any feeling of vertigo. They were preceded by a sensation similar to that of hunger which we experience at the pit of the stomach. It was this feeling that awakened him. It persisted only a few seconds, and then the hallucination appeared. This lasted also only a few seconds—rarely a minute—and was followed instantly by unconsciousness.

There was great variety in the character of the visions with which this patient was affected. Sometimes they consisted of persons, sometimes of animals of various kinds, and again of inanimate objects; and occasionally they were of unpleasant and even of frightful character, but generally they were rather pleasant than otherwise. It was rarely the case that a hallucination was exactly repeated; but once or twice they seemed to him to be similar to others that had

occurred to him on previous occasions. It frequently happened that persons were present when he was the subject of these paroxysms, and they all agreed that not the slightest convulsive movement was apparent.

During the continuance of the hallucination there was no other mental disturbance. When they began to occur, he was in doubt as to their true nature, and was not sure that they were not actual; but a little experience sufficed to set him right on these points, and then he was able to examine into their real character and to talk intelligently about them while they were present. He took considerable interest in studying them, and several times began to write an account of them as they occurred, but he found to his astonishment that although his mind was apparently clear, and that he was able to talk about them with accuracy, it was impossible for him to put his ideas in regard to them on paper, so that what he wrote consisted of repetitions of the same words and was almost unintelligible. He attributed this result in a great measure to mental agitation, due to the fact of his knowledge that the period of unconsciousness was coming, and of apprehension that it would overtake him before he could finish his writing. During the period of unconsciousness he lay perfectly still without convulsive tremor, or movement of any kind; for a few seconds his breathing appeared to be suspended and then it came somewhat irregularly. The eyelids were half closed, the face pale, lips half open, and the general appearance was that of a person in a state of syncope. The pulse, however, was full and strong, and ranged between 75 and 90.

At first, when he was unaware of the nature of his attacks, he fell with force to the ground just as a person does in an ordinary attack of the *grand mal*, but acquaintance with the phenomena of his seizures enabled him to provide against this result by placing himself in a recumbent posture.

I had only one opportunity of seeing this patient in a paroxysm, and that was on the occasion of his third visit to me April 2d of the present year. He had had two seizures the previous night, induced, as he supposed, by some mental disturbance that he had had the day before. He was telling me about the attacks when he suddenly stopped with the remark, "I am going to have one now for I feel the usual queer feeling at the pit of my stomach." He had hardly spoken before the vision came. "It's here," he said, "a singular sort of man such as I never saw before—kind of mixture of man and an animal. It seems to be standing over

there by that book-case grinning from ear to ear, and running his hands through his long hair." While he was speaking he rose from the chair upon which he was sitting and deliberately lay down on the floor. I watched him very carefully, and could see no evidence of mental or physical disturbance beyond that which I have mentioned. As he got himself safely on the floor, he remarked, "I had to be in a hurry, for I won't have much time to"—, and instantly became unconscious without being able to finish the sentence.

I had taken out my watch in order to time the duration of the phenomena. The hallucination lasted sixteen seconds, and the period of unconsciousness two minutes and forty-two seconds. At the end of this time he opened his eyes, which were partially closed, and sat up, remarking, as he did so, "I feel all right now." During the unconsciousness, I had watched him very carefully and am positive that there were no spasmodic movements anywhere to be perceived. His face was pale but not remarkably so; his pulse 82. There appeared to be absolute insensibility of the skin and conjunctivæ. I ran a needle through a fold of his arm without obtaining evidence that the injury was felt, and rubbing the eyeball with the end of the finger led to a like result. Recovery was rapid and complete—their was no confusion of ideas, no derangement of speech. As he rose to his feet he said he had never felt better in his life.

This case is a fair example of what I have designated "thalamic epilepsy." That this and others like it are epileptic in character will not, I think, be questioned; that they possess peculiar features will be readily admitted.

The nearest hitherto described form of epilepsy to this consists of those paroxysms in which the patient has a hallucination of sight and then immediately passes into an ordinary seizure. Many such cases have been reported, and quite a large number have occurred in my own experience. In them the hallucinations are either accepted as realities in accordance with which the patient acts, frequently perpetrating deeds of violence, or the hallucination takes the place of an aura.

They differ likewise from those psychical forms of epilepsy in which there is an altered state of consciousness, with or without hallucinations, to which reference has already been

made. In these forms the cerebral cortex seems to be solely involved, whereas in the variety to which this paper refers the cortex does not seem to be primarily affected, for there are none of the phenomena, such as localized spasmodic movements and intellectual disturbances, that would necessarily result were this part of the brain greatly implicated.

The manifestations of mental derangement are entirely perceptual, and on that account I have considered this form to have its seat in the optic thalamus, although not entirely confined to that organ. The loss of consciousness which ensued showed that there was that necessary cortical disturbance, without which, in my opinion, true epilepsy cannot exist. Hallucinations without loss of consciousness no more constitute epilepsy than the twitching of the hand or a stench in the nostrils, similarly unaccompanied, is epilepsy. Either may become epilepsy by a further extension of the morbid intracranial action, but either may exist indefinitely without such extension occurring.

Again, an additional argument against the involvement of the cortex, is found in the fact that there is no muscular spasm in these cases. Muscular spasms are, of course, not epilepsy; but muscular spasms, accompanied by unconsciousness, make a true epileptic paroxysm. In the case detailed in this paper, and in others like it that have come under my observation, the motor disturbance was replaced by sensorial disturbance, and consequently there was sensorial epilepsy, or, as I prefer to call it from the probable seat of the lesion, "thalamic epilepsy."

I may state in conclusion that under the use of the bromide of sodium, in doses of ninety grains at bedtime, this patient bids fair to be entirely cured. He has had no seizure since the middle of April. The bromide is given in a tumbler of water just as he goes to bed. In the early part of the treatment the paroxysms were several times prevented by the inhalation of the nitrite of amyl.

ART. IX.—A New Remedy for Diphtheria—Bicarbonate of Potassium. By MALCOLM MORSE, M. D., Amissville, Rappahannock Co., Va.

Six hundred operations in diphtheria for tracheotomy and laryngotomy witnessed by Dr. Jacobi, of New York, and two hundred and sixty-one performed by him, render his recent monograph on this disease peculiarly interesting to the profession. A short summary of his treatment, which I will give at the end of his treatise, will probably be acceptable.

My plan is to alkalize the blood with bicarbonate of potassium, as rapidly as I can without disordering the stomach or interfering with digestion.

I try to keep the 2,381,248 sudoriferous glands (Krauss) at work to the fullest extent, taking care not to exhaust the patient by excessive diaphoresis, and to open the 7,000,000 pores (Wilson) by hot baths, sponging the body with a strong solution of bicarbonate of soda and hot water, in order to have these little safety valves in good condition, to throw out as much of the *materies morbi* as possible. The soda removes the dead skin, oil globules, and general *debris* of the body, from the mouths of the perspiratory tubes.

One of the ablest English writers says that the greatest and most valuable improvement in medicine in recent years is the attention paid by intelligent physicians to the condition of the skin. The experiments on himself by Sanctorius, kept up for twenty years, show that five-eighths of all the food and liquid which he consumed was thrown off by the skin and lungs, and only three-eighths by the bowels and kidneys. Working men in the gas-works exposed to great heat have frequently been known, according to Dr. Austin Flint, to lose in weight from two to four pounds an hour.

Nature's method of cure, in a multitude of diseases, is to throw out the noxious particles contaminating the blood, and the morbid and poisonous germs, through the pores. Are we not all familiar with the effect of continued hot bathing in forcing mercurial and syphilitic poisons to the surface? These eruptions are unmistakably visible. Can

we not, by reasoning from analogy, fairly conclude that, though invisible to our eyes, the diphtheritic virus is eliminated in a great measure by the perspiration produced by hot baths and sponging, and that it is of the utmost importance that the mouths of these millions of safety tubes and valves should be kept clear and open? It is well to remember that one of our best authorities states that an appreciable quantity of oxygen is absorbed by the skin (from $\frac{1}{40}$ to $\frac{1}{50}$), cutaneous respiration.

The temperature of the room should be from 63° to 76° —care being taken not to let the room get too cold about day-break, at which time the nurses are apt to become sleepy and negligent. Nearly all our recent medical writers recommend that the room should be well steamed. This important auxiliary treatment is rarely done properly in the country unless the physician attends to having it done himself.

I alkalize the blood by giving as large doses of bicarbonate of potassium for twenty-four to thirty-six hours, as the stomach can easily tolerate, and then I gradually diminish the dose. For an adult, I give from ten to twenty grains every two hours, day and night, and children in proportion to their age. Many cases have been treated by me without a single fatal termination by giving large doses of bicarbonate of soda. In some severe cases I have alternated the bicarbonates every hour.

My reason for using the bicarbonate of potassium was that it was less liable to produce gastric irritation than the carbonate of potassium, which I had seen highly recommended by some eminent German medical authority years ago, and because it is a diaphoretic.

The alkaline treatment was adopted because blood-letting and mercurialization had equally failed to afford any favorable change in the character or duration of the disease. Jacobi, Roberts, Austin Flint, and other distinguished medical men, agree on this point. Bartholow says blood-letting, mercurialization, emetics, nauseants, etc., are rationally contraindicated.

In the year 1862, in Rupert, Vermont, according to Jacobi, the death rate was ninety out of every hundred cases

when treated by bleeding and calomel, and only ten deaths in a hundred when stimulants, iron and chlorate of potassium were prescribed. This is rather a marked difference in results, and one worthy of the reflection of every true physician.

The list of so-called remedies for this disease is long—most of them being inert in affecting any change in the blood, and a large class of them, when given, have not time to produce the specific action claimed for them in a malady that is often fatal in twenty-four hours; while others, highly recommended, interfere with digestion—the very thing we wish to avoid.

Stimulants and liberal and proper nourishment are indicated almost from the beginning. Jacobi says: "The fear of bold administration of stimulants will vanish in this disease, as the fear of opium in peritonitis, quinine in pneumonia, iodide of potassium in meningitis." If the stomach is kept in good working order, and the stimulants and food judiciously administered, the chances are, unless the system is prostrated from the very beginning, that good, healthy blood will be made, which will take the place, at least in part, of the contaminated diphtheritic blood, and that the nerves will be strengthened and braced up by it.

It is now the generally received medical opinion that the throat must not be irritated with strong gargles or caustic applications. My custom has been to use topically mild solutions of chlorate of potassa, with the addition of a little of the tincture of the chloride of iron, or a simple solution of bicarbonate of soda, or carbolic acid in a very diluted state. "*Nemo me impune lacessit*"—No one injures me with impunity—should be the motto for a diphtheritic throat.

Dr. Flint recommends, for local treatment, carbolic acid, salicylic acid, permanganate of potassa, chloral hydrate, sulphate of soda, sulphate of iron, and chlorate of potassa. Dr. Jacobi gives chlorate of potassa and carbolic acid. Of the last named medicine he says: "For gargles, throat washes, and nasal injections, when required, I resort to solutions of from one-half to two per cent." He advises no water to be given immediately after these medicines are applied. Dr.

Flint says: "The application of a liquid may be made by means of a probang, a camel's-hair brush, or spray producer; the last is the preferable plan with children. The chlorate of potassa may be taken dry into the mouth combined with pulverized sugar. Salicylic acid is conveniently applied in the form of a dry powder, combined with dry bismuth.

Iced champagne is one of the best stimulants for children. Sometimes when they will refuse it in liquid form, they will take it frozen. When it is opened, the champagne should be poured into a beer-bottle with tight india-rubber cork, and put into a bucket of ice-water, or kept on the ice, in order that the carbonic acid may not escape.

Sometimes we have trouble in getting young patients to take the brandy regularly; in these cases, by mixing it with milk, or giving it in the shape of egg-nog or apple-toddy, or mixed with mint and sugar, or some aromatic bitters and sugar, we can get over this difficulty.

In severe cases, it is wonderful what a quantity of stimulants a child can take. They should be given very frequently at night. You can hardly give too much. The danger is not in over stimulating, but in under stimulating.

Strong nourishment is now given at the very beginning of the attack. On account of the swelling and tenderness of the throat, I very often have the beef-tea and milk frozen, and allow them to melt in the mouth. Young patients who refuse to take beef extract in the liquid form will take it in this way. Ice cream is a valuable nourishment, and should be given often. I always try to render the medicine and food as agreeable as possible to the children; for sometimes unless this is done, they will refuse to take anything.

It has been my practice, as soon as I am called in to attend the first case of diphtheria in a family, to recommend all the children in the house to be given a good dose of bicarbonate of potassa or bicarbonate of soda three or four times a day. I do not pretend to claim that it prevents them from having the disease, but from close observation for sixteen years I think it generally gets the blood in a condition which renders an attack of the malady less severe. Also I endeavor to have the children either removed at

once from the house, or kept out in the open air as much as possible, and as far off, when in the house, as they can get from the patient's room.

To dissolve the diphtheritic membrane, Jacobi says "only four medicines have held their ground—lime-water, glycerine, lactic acid, and steam." The lime-water and glycerine he mixes in equal parts. He employs carbolic acid not only locally, but internally, in doses repeated every hour, and sometimes every half, or even quarter of an hour, dissolved in water, with or without the addition of alcohol. He uses cold water and ice-bags to the swelling of the lymphatic glands. In nasal diphtheria, which he considers a very dangerous complication unless promptly attended to, he injects every hour a solution of carbolic acid, keeping the patient's mouth open during the operation, on account of danger of irritation to the Eustachian tubes. Sulphur he disapproves of as an application by insufflation to the throat.

His directions for disinfecting the room to prevent the disease from spreading are so important and exhaustive, that I will give them in his own words:

"Fumigating with roll sulphur is the only practical method for disinfecting a house. The rooms must be vacated. Heavy clothing, blankets, bedding, and other articles which cannot be treated with zinc solution, should be opened and exposed during fumigation, as directed below. Close the rooms as tightly as possible. Place the sulphur in iron pans, supported by bricks placed in wash-tubs containing a little water; set it on fire with hot coals or a sponful of alcohol, and allow the room to remain closed for twenty-four hours. For a room ten feet square, at least two pounds of sulphur should be used; larger rooms in proportion.

"Sulphate of zinc and common salt dissolved together in proportion of four ounces of zinc and two of salt to the gallon of water, are used for clothing, bedding, and corpses. The corpse should be kept moist, as the germs of the disease are more apt to spread when the skin is allowed to dry. For sewers and washing, use one and-a-half pounds of sulphate of iron dissolved in a gallon of water."

Guersant says that there are two indications for performing tracheotomy. First, when the difficult respiration and

the asphyxia are permanent and without intermission; secondly, when the disease is not general, but local.

In introducing bicarbonate of potassium to the profession as a new remedy in diphtheria, I do it, not as an empiric treatment, or on theoretical grounds on account of its being an active alkaline and diaphoretic, but I can recommend it honestly; and I can say for it that for the last sixteen years, through several severe epidemics, I have used it in one hundred and twenty-five cases of diphtheria without losing a single life; while at the same time, under the usual treatment by other physicians around me the type of the ferocious disease has often been so fatal that I have known two, three, and even as many as seven, patients to die with it in one family in my neighborhood. But I will not be responsible for the success of this alkaline treatment unless the auxiliary treatment described in this article—a great portion of it approved by the kings of our profession—accompanies the use of the bicarbonate of potassium.

Clinical Reports.

Incision into the Pelvis of Kidney, and Treatment Topically through Drainage Tube, for the Cure of Bright's Disease,—Case; Successful—Remarks. By T. B. WILKERSON, M. D.,
Young's Cross Roads, Granville Co., N. C.

Peyton P., æt. 30 years, married, a well-to-do farmer of Halifax county, Va., of no traceable hereditary or acquired constitutional taint, consulted me in March, 1886, for some renal trouble. He dated the inception of his malady to a blow from the falling top of a pine tree, the latter striking him while in a stooping position on the back in the right lumbar region. This injury was inflicted about one year previous. For more than six months the man had been confined to his bed a helpless invalid; the face presented a marked cachectic pallor with some tendency to œdema around the eyes. General appearance showed extreme emaciation; appetite bad, the little food taken gave rise to colic-pains attended with gaseous eructation; anorexia frequently accompanied

with nausea and vomiting; skin devoid of moisture, harsh and dry; constant thirst with some hectic flush towards evening. Hebetude of mind formed a noted feature in the case, the responses to questions being hesitating in manner; in fact, there was a growing tendency to sopor; anasarca present in the lower limbs. The patient had suffered more or less ever since the reception of the injury with dull aching pains in the right lumbar region extending down the groin to the testicle and along the thigh of same side. This uneasiness was greatly aggravated during damp cold weather. Micturition has given some trouble—the calls to void the urine becoming oftener than common, especially during the night. A careful urinalysis by his attending physician during his confinement had demonstrated the fact that there was a persistent loading of the urine with albumen; that the specific gravity had gradually lowered to 1008, and that pus and blood were present in the fluid. The quantity discharged during the twenty-four hours had fluctuated, but with an increased lessening below the normal standard measure. Microscopical examination had detected tubular casts and granular matter; urine generally of a dark brownish hue, showing considerable sedimentary deposit when allowed to stand for a short time. A general summary of the symptoms noted in this case, together with the rapid loss of vital stamina in the patient, notwithstanding the excellent hygienic and therapeutic surroundings that had been afforded him, warranted the belief that he was fast nearing the fatal terminus of Bright's disease, and that the danger-signal, "coma," was nearly in view. A careful deep palpation on the side over the position supposed to be occupied by the right kidney gave an indistinct fluctuation. The absence of any hypertrophy of the heart and of disease in any other of the important organic viscera, and the pointing in the main of the rational symptoms to the right lumbar region, led me to hope that the disease might exceptionally be unilateral in character.

Fully cognizant that a point had been reached in the case where any further medicinal measures would prove futile, I determined to perform the following operation: After having satisfied myself of the existence and non-rudimentary character of the twelfth right rib, the patient was placed on a narrow firm table, before a good light, in the prone position, with a slight inclination to the right side; and fully under the influence of chloroform. *March* 10th, 1886, assisted by J. W. Tuck, M. D., and some medical stu-

dents, an incision was made through the skin and superficial fascia, commencing a little below the border of the twelfth right rib, extending downwards nearly four inches along the border of the sacro-lumbalis muscle. Then finding the position of the quadratus lumborum, the upper border of the latter was carefully brought into view by dissection on the grooved director. Having the lips of the wound held well apart, the deep fascia surrounding the adipose capsule of the kidney was divided; and after separating the little fatty tissue present, by gentle manipulation with a covered probang introduced under the lower surface of the kidney, the latter was slightly dislocated laterally. This manœuvre exposed the cyst wall; this being nicked was freely laid open. The extreme tension caused the contained pus in the sac to spurt up nearly a foot. The cyst was slightly mushroom in shape with the neck towards the pelvis of the kidney. The latter was opened sufficiently to admit the finger, and over a pint of matter was expelled.

Two small cysts situated on the upper edge of the hilum renale were broken into. These contained albuminoid-like fluid. After thoroughly washing out the abscess cavity with a solution of permanganate of potash, the true cyst wall was well swabbed with a mop dipped in carbolic acid; this was done to destroy the pyogenic membrane. A short soft rubber drainage tube was well located in the pelvis of the kidney, and to prevent its displacement, a suture was passed through the instrument, then through both lips of the wound, and tied. The wound was closed by sutures and adhesive plaster. The cavity was directed to be washed out thrice a day with a quarter-grain solution of permanganate of potash. The following pill is invariably used by me after every surgical operation:

R \bar{y} . Acid. carbolic.....gtt. xij.
 Pulv. opii.....gr. vj.
 Quiniæ sulph.....gr. xv.

M.—Make twelve pills. S.—One 3 times a day.

For forty-eight hours after the operation there was considerable dyspnœa, the patient complaining of a heavy weight resting on the right breast; but little rise and fall were noticed in the thoracic walls of this side. Until the subsidence of this phenomenon it was feared that probably the pleura had been injured. The drainage tube was allowed to remain in for three weeks. Five weeks after the operation, the wound had healed, and a marked amelioration of the general symp-

toms was plainly visible—there being a gradual abatement of the renal trouble. The patient continued to improve, and now four months after, the man is walking about attending to his business, has gained over twenty pounds in flesh, with no evidence of his former trouble. Scarcely a trace of albumen remains in the urine; the specific gravity is up to the normal standard; he voids the fluid without pain, and in the usual quantity; anasarca has disappeared, and in fact there is every hope that the man has been restored to perfect health.

Remarks.—The application of the knife for the cure of Bright's disease will be regarded by the medical profession as a pioneer step on the road of surgery; but where all medical treatment has been exhausted and a fatal issue is inevitable by the routine of treatment, and where there is a reasonable supposition that a pus sac exists, or that septic material is forming in the kidney, a probatory incision into the pelvis of the organ, and, through a drainage tube, the direct topical application of alterative antiseptics, afford a hopeful plan of treatment. Pathological anatomy has demonstrated the fact that in Bright's disease there is going on a dangerous irritative inflammation in the tubuli uriniferi; and resulting from this morbid change there is an effusion of effete material. The collection of this matter in the pelvic depository of the organ—no matter how minute the quantity—as long as it remains, threatens danger from septic decomposition. The absorption of this poisonous sepsis into the general circulation may produce a fatal pyæmic or septicæmic attack. The coma frequently preceding the final issue in the disease is no doubt in many instances due as much or more to this cause than to uræmic poisoning.

The time will doubtless come ere long when all diseases will be traced to a germinal beginning, and the fructifying agent accurately classified. It has already been asserted that the disease following scarlet fever is due to the accumulation of scarlatinal bacilli in the kidney; the destruction of these by local treatment might be a great factor gained. It may be stated that where there is a reasonable diagnosis that the disease is unilateral, or, if both organs are affected, the one giving the most prominent symptoms may be en-

tered by a probatory cut, and the other will sustain life, while this is undergoing treatment; for the cutting into the pelvis of the kidney does not necessarily suspend its functional action. On the other hand, if benefit accrues, the eliminative and secretory action will be increased. This fact has been demonstrated in operations for pyonephrosis when both kidneys were implicated. The ante-mortem examination of the kidney in this case showed a portion undergoing granular atrophy, and the lower surface dotted with amyloid spots.

Traumatic Tetanus—Report of a Case. By R. H. GARTHRIGHT, M. D.

Miss E. S., aged thirteen years, stuck a splinter in the palm of her right hand March 25th, 1886, a part of which was immediately removed. The rest remained buried half an inch or more in the tissues for about one week. It was then removed by her father. I saw her first on the 18th of April with Dr. R. C. Irving.

Sharp pains every few minutes were darting from the cicatrix on the hand, along the arm to the spine. There was a considerable amount of rigidity of the post-cervical muscles; also of those lower down the vertebral column. The hand was flexed, so that the ends of the fingers nearly reached the wrist, and when an attempt to extend one or more of the fingers was made, the patient would scream with pain. Her head was drawn backward; she was constipated; had no fever, and no delirious symptoms.

A warm hop poultice was kept constantly wrapped about her hand, and a blister plaster was applied along the spinal column from the seventh cervical vertebra to the first lumbar. Ten grains sulphate of quinia were administered, and then five grains every six hours. Also the following:

R_x. Potass. bromid..... \mathfrak{z} ij.
Ext. gelsemii. flu.....gtt. xxx.
Aquæ..... \mathfrak{z} ij.

M. Sig.—Teaspoonful every two hours.

I remained with the patient through the night, giving the medicine regularly. During the morning before, Dr. Irving had administered five grains of calomel with ten grains of

bicarbonate of sodium. The bowels had not moved at midnight. I then gave one drop *oleum tigllii*, and repeated the dose three hours later without obtaining the desired result.

April 9th, 6 A. M.—Administered an enema of turpentine and castor oil. Patient grew gradually worse as the day advanced. About dark, two drops *oleum tigllii* were given. The bromide solution and quinia were continued.

April 10th.—Condition no better; bowels still locked up. Complained of nausea, and had to discontinue use of bromide solution for fear of producing gastritis. Opisthotonos more decided; pains more frequent and lancinating. From this time on morphia was used hypodermically two or three times a day, as indicated.

April 11th.—The rigidity had extended to the muscles of mastication, and she had to be assisted to open her mouth to take food and medicine.

From the 12th to the 14th there was no material change in her symptoms.

On the morning of the 15th a bag of ice was applied along the spine and kept there for some six hours. This would have been done earlier but for the difficulty of obtaining the ice. Every few hours two or three spoonfuls of milk toddy were given, and occasionally a small amount of chicken broth, an oyster or two, etc.

16th.—At 9 A. M. gave—

Ry. Ext. colocynth co.....gr. v.

Ext. jalap pulv.

Hydrag. chlorid. mit.....aa gr. iij.

Gambogia.....gr. j.

M.—Ft. pill. no. iv.

The bowels had not moved at six o'clock of the same day, and two drops *oleum tigllii* were administered. Morphia had to be continued.

17th.—Good action from bowels. From this time her symptoms grew gradually better, and in two weeks she was up.

PEACOCK'S BROMIDES is a valuable remedy, and I can heartily recommend it to the profession where the use of such a preparation is indicated. It takes the place in our list of remedies that has long been needed. It is all that is claimed for it,—A. M. CHORD, M. D., Logansport, Ind.

Correspondence.

Section of Gynæcology in State Board of Medical Examiners Criticized.

Mr. Editor,—It was with some surprise that I saw announced in the *Virginia Medical Monthly*, that the Examining Board had determined to add to the subjects upon which candidates were to be examined for license to practice medicine that of gynæcology—that is, to “adopt a section of gynæcology;” and though it is with some diffidence that I would presume to criticize so learned and honorable a body, I think that their action in this regard is entirely premature and liable to criticism. I would not have it thought that I wished to depreciate that young science (if we can call it so), or that I undervalue the labors of the pioneers in this department of medicine. So far from it, I think I can see great possibilities and expect most important developments in it.

But while this is the case, it must be admitted that gynæcology has not advanced to the dignity of a science. There are but few foundation stones on which to build as yet. These few may be on firm ground and may ultimately furnish solid basis for the superstructure, but it cannot be claimed that the bridge is already built that will transport us over the difficulties to be encountered. There are hardly any subjects in medicine upon which there is so much discussion, or about which there are such differences of opinion.

These discussions in England have been very full and free, and most decided opinions expressed *pro* and *con*. Attempts have been made to throw ridicule upon it, which have been justly rebuked on both sides of the ocean. We credulous Americans are easily captivated by anything and everything new, and therefore we hear but little, comparatively, of them here. We are proud, and justly proud, of the advances made by our own Sims and Battey and Emmet, and believe that they have laid the corner-stones of what will, some day, be a great superstructure; but the building is not yet ready for occupation, and will not be until the stones which we are all attempting to hew out are fitly joined together.

It is evident then that if what we call *gynæcology* has not

been elevated to the dignity of a science—if it is still *sub judice*—if there are differences of opinion among the profession with regard to many of its so-called principles, or if different estimates are placed upon some of its procedures by different members of our own Examining Board, it is clearly not a subject by which to test the qualifications of a candidate for practice.

Let us imagine a case which would afford a good illustration of the point at which we are aiming. Suppose, for instance, a candidate were examined by our friend, Dr. Bedford Brown, of Alexandria, who, from his large experience, his conservative views, and his good, sound judgment, has arrived at the conclusion that lacerations of the cervix uteri were not as common as by many are believed, and that where they exist they do not always need surgical interference, but can, many times, be cured without it. Suppose this candidate in answer to a question relating to Emmet's operations were to answer in accord with these judicious views. His reply would be marked 10 by Dr. Brown and by all the Examiners who agreed with him. Now suppose the answer be passed on to some enthusiast, who, with "more zeal than knowledge," contends that "every woman from Mother Eve down" has had and is suffering from lacerated cervix, and that the only remedy is Emmet's operation. What is to become of it? It will be endorsed very differently by him, and the success of the candidate will depend upon the preponderance of these or the other views on the Board.

This is only one of many unsettled points in gynæcology. Though some of these specialists have become exceedingly expert diagnosticians the points of diagnosis are not so settled as to enable every one to distinguish unerringly between different conditions. In proof of this I need only to refer the "case of protracted gestation," reported by me and published in the *Journal American Medical Association*, January 30th, 1886, in which the great blunder was made, and by an expert too, of diagnosing a fibroid tumor for a live fœtus. It is all yet too new, and too uncertain, to make gynæcology a test of qualification to practice medicine.

While I would denounce this subject as, at this time, not a

proper one to be adopted by the Examining Board, I would insist upon its being taught in our schools. I think that every student should enter the profession well equipped for prosecuting this important study, and should be so impressed with a sense of its importance that he will become an intelligent and earnest investigator, who may be able, at some future day, to add to our stock of knowledge in this department.

Entertaining these views I could not be suspected of being in sympathy with those who have attempted to ridicule this "fashionable specialty." I feel compelled to denounce those utterances of Allbutt (Gulstonian Lecture, 1884), where he speaks of the patient as "entangled in the net of the gynæcologist, who finds that her uterus, like her nose, is a little on one side; or, again, like that organ *running a little*, or it is as flabby as her biceps, so that unhappy viscus is impaled upon a stem, or pressed upon a prop, or is painted with carbolic acid every week of the year, except during the long vacation when the gynæcologist is grouse-shooting, or salmon-catching, or leading the fashion in the upper Engadine." And further addressing the College of Physicians, he says: "It is time that we complete our reaction from this gynæcological tyranny and that we, of this College, no longer permit ourselves to be snubbed by these brethren of ours who calmly tell us, with their superior airs, that our use of such expressions as uterine neuralgia, neurasthenia, and the like, comes from a narrow sciolism, and is grounded on the emptiness of our knowledge of uterine diagnosis."

I close this communication with a few extracts from a paper, by a specialist in gynæcology, read before the Alumni of the Woman's Hospital, New York, January 26th, 1886, entitled, "Local *vs.* general treatment in gynæcology," as a sample of the views held in this country.

Speaking of "Simpson, Simon, Baker Brown, Sims, Grailey Hewitt, Emmet, and others," he says: "All of these men have had their *hobbies*, which they have ridden with the persistence and determination of strong-minded men, and have produced decided effect upon those who came within the range of their teaching. With all of them the *alpha*

and *omega* of their treatment can be summed up in the term *mechanical therapeutics*. The result has been *an unsettled mess* of ideas (*italics mine*) in the minds of many of the followers of these great men, based upon experimentation and *not upon fixed pathological truths*, and this has led to a great deal of unnecessary, or at any rate, unsuccessful surgical interference."

Again, "How large a number of those operative procedures, which were the results of the formative stage of gynæcology, are now either obsolete or of questionable value."

Again, "Hence it follows that those who have attempted to carry out these doctrines, often with an imperfect comprehension of their scope and with imperfect skill, have sometimes been led into error and mischief."

Again, "Neither of these operations (clitoridectomy and discission of vaginal portion of cervix uteri) ever reached the importance which their advocates probably thought they deserved; they were tried and found wanting, and, except as matters of history, have passed into disuse and oblivion."

Lastly, he says: "There is need that our knowledge of uterine pathology *be much more precise and much more extensive* than it now is. We do not know the minutiae pertaining to the functions of menstruation, notwithstanding the excellent work that has been done in this field by Leopold, John Williams, Möricke, Wyder, and some others. We are in doubt as to the influence of the ovaries and tube in certain important questions; and as to the relation of the bladder to the nervous system, we can only give a series of shrewd guesses; in short, while there has been theorizing enough in regard to every morbid condition of the female genito-urinary apparatus, the yield of absolute facts and principles *has not been abundant*."

With these admissions from a professed gynæcologist it is needless to say more in support of my position, that this should not in the present state of our knowledge be made a test of qualification for the practice of medicine.

S. K. JACKSON, M. D.

Norfolk, Va., 140 Freemason Street.

P. S.—Since the above was written, I see by the report of

the Board, published in the May No. of *Virginia Medical Monthly*, that gynæcology was not placed in a separate department, but was merged into that of obstetrics. This affords no occasion of altering what has been said on the subject, for it will still be included in the subjects for examination.

S. K. J.

Examination of State-Border Practitioners Advocated.

Mr. Editor:—In your July issue appeared an editorial, the objective idea of which was that some arrangement should be made by which the practising physicians living in States bordering on our own, within certain distances from its limits should be allowed to practice in Virginia without undergoing the ordeal of our State Examination. Now, your correspondent does not see the fairness in any such arrangement.

1. Physicians living in our State, no matter how close to the confines of other States, must stand the State Examination before they can be allowed the privilege of practicing their profession, at their own home; and while we are advocates for limited free trade, we think it unfair to allow foreign doctors to come into our State without discharging all the obligations laid upon our own citizens. If, too, we allow the border physicians from North Carolina, West Virginia, Maryland and District of Columbia to come into our State to practice medicine, without obtaining the certificate of our State Board of Examiners, how could we with any justice lay embargo on those gentlemen who are always on the alert to spend the summer at our watering-places, posing in the rôle of *Resident Physicians*, having a good time, and returning to their city homes recruited oftentimes more in pocket than in health?

2. The "Act regulating the Practice of Medicine and Surgery in Virginia," already allows physicians from other States to meet our own physicians in consultation, and return home with a fine fee; so that our native doctors, ever under existing provisions get all the benefits of foreign ad-

vice, and that without doing any injustice to the consulting physicians; and it must appear that the charge of insufficiency in the law, as far as regards this point at least, is ungrounded.

3. The most important point of difference between the Virginia law regulating the Practice of Medicine, etc., and that obtaining in most other States, is that it recognizes no diploma or certificate from any college or medical school whatever—in many other States the exhibition of a *diploma* being all that is required. Now, then, why should our State Board recognize a certificate from another State Board, refusing the privilege to *some* of our medical colleges? Nor would we bring any charge against the Medical Examining Boards from sister States, though forced to differ from the editorial before us in claiming that we have no guarantee that either our own Board, or those in our border States will always be formed on the basis of individual merit in its component members rather than with regard to political popularity.

4. In order that such an arrangement as the one contemplated should be consummated the “*law*” will again have to be put into the hands of the Legislature, and we are sure that the unwisdom of such a step must be apparent to all.

Now, sir, you invited opinion at variance with your own. Ours is given for what it is worth.

AN “EXAMINER” IN VIRGINIA.

[Our esteemed correspondent is mistaken in the statement in his first paragraph of our proposition. Our proposition referred only to *border States that have similar laws to our own in regard to examinations of doctors who propose to practice in their respective States*—doctors who have their certificates of qualification from their respective State Boards of Examiners. In the present state of affairs, so far as Virginia is concerned, our proposition would apply only to North Carolina border doctors, because North Carolina is the only adjoining State that has laws requiring examination of candidates for practice anything like similar to our own. Until Maryland, District of Columbia, West Virginia, Kentucky or Tennessee adopt the system of examinations required in Virginia or North Carolina, no doctor from any of them should be al-

lowed to practice in either Virginia or North Carolina unless he has the certificate of satisfactory examination from one or the other of these two State Examining Boards.

We very gladly lay the above letter before our readers—especially as it expresses views differing from our own. We like to hear the other side always in matters worthy of discussion. It is the best way to get at the right. *Edo ut prosim.*—EDITOR.]

“Meddlesome Midwifery.”

Mr. Editor,—We are told that when Spinola besieged Bergen-op-Zoom, a woman near her time, fetching water, was cut off in the waist by a cannon ball, and her lower parts fell into the water. People ran immediately to her and saw a child stir in the water. It was drawn out and carried to Don Cordea’s tent, where it was carefully attended. Afterwards it was carried to Antwerp, and the Infanta Isabella caused it to be christened by the name of Albertus Ambrosas.

The Dutch foetus appears to be remarkably tenacious of vitality. Prof. Von Kamssen, in his work on Holland and Belgium, tells us that the church at Zoandam reports a picture description of a curious accident. A furious bull had killed his master in the presence of his wife, who was *enciente*. In her agony of despair she rushed toward the ungovernable animal, which with its horns tossed her into the air; she fell, and the infant to which she gave birth, in dying, survived the catastrophe.

Vol. VI., Part 2, of the *Transactions of the Medical and Physical Society of Calcutta*, contains a case by Dr. Spilsburg, which is at once more creditable and more remarkable than either of the above. The wife of a Madras Sepoy, far advanced in pregnancy, was riding on a bullock when the animal stumbled and fell; she was pitched forward on one of the horns of the bullock, which entered about an inch above the pubis, penetrating the cavity of the womb. This happened at sunset. At 11 P. M. Dr. Spilsburg saw

her and found the head of a child protruding through a wound two inches long, from which there was a slight hæmorrhage and discharge of liquor amnii. The woman, by her own account and the size of the child, being near her full time, labor soon commenced on irritation of the os tinæ. The child scarcely breathed after birth, and had been injured by the horn on its neck and shoulders. On expulsion of the child, considerable protusion of the intestines took place, but was easily and speedily prevented. With the exception of moderately inflammatory and febrile symptoms, which set in twelve hours after delivery, but which proved amenable to prompt antiphlogistic treatment, recovery appears to have been as rapid and complete as is usual after natural parturition.

G. E. MATTHEWS, M. D.

Ringwood, N. C., September 1st, 1886.

Cocaine for Opening Sinuses—Mercuric Bichloride Solution for Healing Sinuses—Cocaine for Nasal Polypi.

Mr. Editor,—The report and discussion on "The Therapeutic Effects of Cocaine," published in the August number of the *Virginia Medical Monthly*, induces me to add my little tribute to the literature of the valuable properties of this wonderful agent.

In the spring of 1885 I treated a very severe case of phlegmonous erysipelas of the forearm, in which a large number of sinuses having to be cut up, I tried the injection with a hypodermic syringe of a four-per-cent. solution of cocaine into the open extremity of the sinus. In cases of short sinuses, and especially those having two openings, in which the drug reached the whole extent of their length, the effect was excellent—the cutting being painless. The patient remarked that he could distinctly feel the passage of the knife through the tissues, although it did not hurt him at all.

At that time cocaine was very high, and I was confined to a limited quantity in my experiments, but I have no doubt

that by the use of a suitable quantity such operations might be rendered painless.

In speaking of this case, I will mention that some very short sinuses were treated without being cut by daily washing them out with the 1 to 1000 solution of bichloride of mercury in whiskey and water, with which the parts were sprayed.

A few weeks since, in treating a nasal polypus by injections of carbolic acid, which is quite painful, I found that the application of a two-per-cent. solution of cocaine with a small atomizer made the operation painless.

Cocaine is certainly a most valuable addition to our materia medica.

R. M. SLAUGHTER, M. D.

Theological Seminary, Va., Sept. 6th, 1886.

Original Translations

From German. By M. D. HOGE, JR., M. D., Richmond, Va.

Case of Hydrophobia—Cauterized—Death. (*Jahrbuch der Kinderheilkunde*, 1886).

Dr. B. Unterholzner, of Vienna, reports a case of a child 11 years of age who died from the effects of a bite on the lip. The wound was at once cauterized, and in two weeks time healed. The period of incubation was twenty-four days. During the first two days of his sickness there was chilliness, nausea, malaise, great thirst, but dread of water, difficulty in swallowing, great restlessness even while sleeping. On the fifth day, these symptoms became more violent, especially the vomiting of brown bloody masses; the wound on the lip became of livid hue; increased respiration (22) and pulse (128); high temperature (104° F.); and violent headache. As the disease advanced, the symptoms grew more violent: twitching of the muscles, general convulsions, disturbance of the sensorium, delirium, and cramps of the respiratory muscles—dying on the sixth day asphyxiated.

Among the most important pathological changes found

were excessive hyperæmia and serous transfusion in the pia mater of the brain and spinal cord; also prominent hyperæmia of the cortical substance of the brain and gray matter of the spinal cord. The ecchymosis of the pleura and pericardium viscerale, and the dark red coagulated blood, were characteristic of infectious diseases.

Case of Aneurysma Aortæ Greatly Improved by the Use of Iodide of Potassium. (*Pester Medicinische Chirurgische Presse*, 1886).

A government official, age 54, applied to Dr. Berényi for treatment on account of sudden hoarseness. He had been treated by a specialist during the previous month for rheumatism of the left vocal cord. But as he gradually grew worse under the electric treatment, at night his discomfort amounting almost to suffocation, and as he had difficulty in swallowing liquids, he consulted Dr. B., who diagnosed an aneurysm of the aorta in the fossa jugularis. He was put on iodide of potassium, gr. xxv daily. A very perceptible improvement was noticed during the next month; the asthmatic attacks disappeared entirely; also the painful deglutition and hoarseness; from being very thin and emaciated, he became quite robust. Dr. B. proposes to continue the use of the iodide of potassium as long as the system will stand it. He has taken 170 grammes without any sign of iodismus.

Use of Antipyrin in Articular Rheumatism. (*Berliner Klinische Wochenschrift*, 1886).

Dr. Jolebiewski, while attached to the military forces in Dresden, has observed the effect of antipyrin in seventy cases of rheumatism. He places its action on an equal with acid salicylic. The action was in general very prompt. The average duration of the disease in the above recorded cases was three to four days. He thinks it best to begin with large doses—sixty grains night and morning. This dosage was not strictly adhered to when the patients were very weak and thin, or when there were complications with other diseases—a much smaller amount then being given.

Antipyrin proved as much a specific as salicylic acid in chronic as well as in acute cases. There was no case of collapse. In only two of the seventy was there urticaria. The amount of perspiration varied extremely with different individuals. Nausea was quite often observed, especially when taken near meal times.

Use of Esmarch's Bandage in Local Anæsthesia. (*Lyon Médicale Nouvelle*, 1886).

Chandelux recommends in all those cases in which an extremity is to be anæsthetized by Richardson's ether spray, that Esmarch's bandage should be first applied. The advantages are: The anæsthesia is complete in from twenty to forty seconds; besides, the local effect will last much longer, generally three minutes, because the part cannot be warmed by new blood flowing through. And lastly all absence of blood from the field of operation makes it much easier and safer. The bandage is contra-indicated if the part is in a high state of inflammation.

Diagnosis of Initial Effects of Syphilis. (*Bollet. della Soc. tra. i cult. della Scienze Med. in Siena*, 1886).

Dr. Tommasoli, speaking of the difficulty of a differential diagnosis of the initial effects of syphilis and herpes progenerialis, says that the signs given as follows by Kohn, often fail: (1) The condition of the neighboring gland; (2) the consistency of the basis of the lesions; (3) the periphery, which in syphilis is regular and homogeneous; in herpes, is made up of a number of circular segments. Leloin published in the *Annales de Dermatologie*, 1885, a new and important fact, namely, when a chancre is pressed firmly between the fingers, either no fluid at all or very little comes out; in any case it is difficult to get any fluid out a second time. With herpes on the other hand, on pressure, a serous clear liquid comes forth easily, and increases as often as repeated.

Tinctura Lobeliæ Inflatæ for Asthma. (*Deutsche Medicinische Zeitung*, 1886).

Dr. Nunes has used as much as fifteen grammes of the tincture as a dose without any bad effect. For asthma he uses with great success, the following:

Ry. Ammonii benzoici.....	10 grammes.
Tinctura lobeliæ inflatæ.....	30 "
Aquæ distillatæ.....	200 "

M. S.—Twice daily one tablespoonful.

I have tried Kennedy's *Pinus Canadensis* in sub-acute tonsillitis with good results, and am well pleased with, and shall prescribe it.—O. T. PRATT, M. D., Taylorsville, Ills.

Analyses, Selections, etc.

Abdominal (Post-Tubal) Pregnancy in a Woman with Double Uterus and Double Vagina.—Laparotomy Successful.—Remarks.

Among the curious cases that arise in practice, presenting at the same time some points of interest that may be useful to study by doctors generally, is one reported by Dr. J. R. Bratton, of Yorkville, S. C., in the *Transactions of the South Carolina Medical Association*, 1886—just issued. Dr. T. S. R. Ward, residing in the western section of York county, furnished the notes of the case: On August 11th, 1885, he was called to Mrs. B., aged 17, primipara, delicate physique, humble position in society, having few if any comforts, and with unhappy surroundings. She had not menstruated since February 10th, but enjoyed usual health up to twelve hours before he arrived, but now was in much pain. In playing with her husband, she was thrown in a strained position, and pain in her bowels, especially on the left side, immediately developed. Soon afterwards a slight hæmorrhage occurred from her womb, as she expressed it. On Dr. Ward's arrival, pulse was frequent, thready and feeble; her face and lips pale; her skin cold, and her abdomen much enlarged. No contraction of the uterus could be felt by external manipulation. Morphine to relieve pain and stimulants to increase the force of the heart's action were prescribed.

August 12th. No improvement. The pains had no contracting effect upon the uterus. On digital examination, he felt what he thought the foetal head in the right iliac region somewhat lower down than the os uteri. Morphine was continued, and an enema with castor oil was ordered for the next day to empty the bowels.

Dr. J. P. Hambright, of Clark's Fork, attended her for Dr. Ward until 17th. He continued the same palliative treatment until Dr. Ward returned (on 17th). On digital examination, Dr. Ward discovered two vaginæ, separated by a fibrous septum, and suspected extra-uterine pregnancy. He continued the same treatment, with nourishing diet, for ten days, when she developed irritative or hectic fever, and was daily growing worse. Dr. R. Andral Bratton, of York, went in consultation. Manual and instrumental examination showed a double vagina, with a complete septum, sepa-

rating them as far back as the junction of the cervix with the fundus of the uterus, and also the doctors found two uteri fully developed in size and structure. The vaginae had a depth of about five inches. The septum was smooth, elastic, and fibrous in character, and lined with healthy mucous membrane; but this membrane did not present that bluish tint, indicating previous congestion, which commonly attends normal uterine pregnancy. Neither uterus was enlarged, and the uterine sound showed each uterus to be empty and of normal dimensions. The right uterus was in normal position, and its axis extended upwards and forwards. The axis of the left uterus extended backwards and downwards towards the hollow of the sacrum. No manipulation with the sound could detect, nor was there any other circumstance indicating that there existed any direct communication whatsoever between the cavities of each uterus. Both the patient and her husband were totally ignorant of such abnormalities.

The abdomen was quite uniformly enlarged, somewhat more so in the left iliac region. It was here that the patient first "noticed a lump," which continued to enlarge, until she received the fall, when pains came on, and in a few hours the right side became almost as full and round as the left. She had experienced "no movements" in her bowels since she fell. The mammæ presented the usual areolæ.

The doctors, having thoroughly analyzed all the signs and symptoms, diagnosed ectopic or abdominal pregnancy which primarily was a case of tubal pregnancy. Their theory was that as a result of her fall, rupture of the tube occurred, and the sac, still entire, with its contents, passed into the abdominal cavity; and that with rupture of the tube, the artery supplying that tube was lacerated; hence the hæmorrhage and collapse. Laparotomy was recommended and the family consented.

Accordingly, on September 14th, assisted by Drs. T. A. Crawford, Andral Bratton, Ward, McCheny, W. J. White, Hambright, and T. W. Allison, the tissues were dissected down slightly on the left side, about four inches above the pubis, to the sac, which adhered to the abdominal wall in front for a small space. On opening the sac within the circle of adhesion, a large quantity of dark—almost black—very offensive fluid gushed out. The foetus was removed with a portion of the umbilical cord—both in a state of decomposition. The placenta (which was attached to the sac near to the umbilicus of the mother, at the upper angle and

to the left of the incision) was left in position. The umbilical cord was ligated near the body of the placenta, and another portion of it was removed. The remaining contents of the sac were sponged out thoroughly with carbolized fluid and a solution of corrosive sublimate. The incision was closed by deep and superficial wire sutures, and the whole covered by the usual antiseptic dressing of iodoform gauze, borated cotton, etc. A bandage was applied over all, and the woman put to bed on her back with instructions to maintain that position. Until a large drainage tube could be obtained, three small rubber ones were introduced in the sac, and the patient left under Dr. Ward's care.

The after-treatment consisted in the free use of quinine, iron, alcoholic stimulants, full nutritious diet, and free washing out the sac frequently through the day with warm carbolized water, and daily changing her clothing as well as the bed clothes. This treatment was continued until November 5th, when the case was dismissed [as cured?]. During the after-treatment the temperature was never higher than 102° F., nor the pulse more than 120 beats to the minutes.

The physical signs upon which the diagnosis of extra-uterine pregnancy was based, were:

1. Regular menstruation till February 10th, when it ceased.
2. Gradual enlargement in left iliac region, with a sense of "motion" previous to August 12th.
3. Sudden and uniform enlargement of abdomen, caused by rupture of the Fallopian tube, with hemorrhage into the foetal sac, as well as into the left uterus, the result of a twisted, strained position of her body during the romp with her husband.
4. Dark areolæ around nipples, and slight collection of milk in mammæ.
5. Ballottement and discharge of deciduous membrane.
6. Absence of contraction of either uterus, as well as of the sac during the pain because neither uterus contained anything to contract upon, and because the sac had no muscular fibres by which to make contraction; hence "the pains" constituted "pseudo-labor."

The laparotomy was done in a month after abdominal pregnancy was diagnosed, and sepsis had begun to manifest itself by evening exacerbations, etc., which bring the operation at this time under the class of *primary operations*.

Lusk, Parry, Tait, Freeman, Thomas, and other high authorities disapprove of primary operations. Thomas

especially advises delay till the ninth month if the child be alive. If the child be dead, wait for the shrinking of the placenta. Lusk says the danger of hemorrhage and septicæmia are greatly decreased by the cessation of the maternal circulation and thrombus, and consequent obliterations of the maternal vessels and cutting off the blood supply to the placenta. "Dr. Freund advises, when the child has died spontaneously, and if there be no re-action, to wait; if there be peritonitis, to treat the symptoms, and then operate as in circumscribed exudation—to open, evacuate, and drain." When local and general symptoms of re-action appear, especially those of general infection, I would do laparotomy.

As to whether elytrotomy or laparotomy should be practised, Dr. Tait says, "vaginotomy should always give place to abdominal section." Dr. Parry says if "elytrotomy is resorted to, it should be confined to cases in which some portion of the child, especially the head, presents in the pelvis." "If symptoms of peritonitis or exhaustion endangering life, or rupture of the cyst should supervene, gastrotomy is indicated." Deschamps says, "If the fœtus be small and situated in the pelvic cavity, if the posterior cul-de sac is filled by the tumor, incision per vaginam may be resorted to."

Since authorities differ so widely, Dr. Bratton thinks it would be not only conservative but rational in such cases to perform both elytrotomy and laparotomy. By this process the septic fluid contents of the sac could be drained away per vaginam, whilst the solid portions of the fœtus could be extracted through the abdominal incision. And seeing the great dangers of either interstitial, tubal, or abdominal pregnancy, and the many failures of the conservative powers of nature to relieve the mother, is it not best to destroy by electricity the fœtus at the age of two or three months? Or else perform Tait's operation at once, remove the tube and its contents, and treat the case as one of salpingitis?

F. L. NEWMAN, M. D., Ouachita City, La., says: It affords me much pleasure to testify to the great merits of Celerina as a nerve tonic. It is the remedy "par excellence" in all cases of nervous exhaustion. I prescribe it with confidence. That I have never seen it fail to produce quiet refreshing sleep for the patient when suffering from brain exhaustion and overwork, makes it a remedy incomparable. It is the "King of Nerve Tonics."

Book Notices.

A Reference Handbook of the Medical Sciences. Embracing the Entire Range of Scientific and Practical Medicine and Allied Sciences, by Various Writers. Vol. III., FAC to HYS. 813 pages. Illustrated by 6 Chromo-Lithographs and 718 Fine Wood Engravings. Edited by ALBERT H. BUCK, M. D. Supplied to Subscribers only. Price per vol., Cloth, \$6; Sheep, \$7; half morocco, \$8. William Wood & Company, New York.

We are glad to announce the issue of the third volume of this invaluable work. The title but half expresses the full scope of the work; and yet we could not easily supply a better. The word *hand-book* would perhaps lead one to look for a small, handy book, containing very short or purely synoptical articles on the numerous subjects of which the work treats; but such is not the kind of volume we have before us. For it is large, somewhat unwieldy, not handy, and the articles are, in most important references, quite exhaustive papers. The article on the Face, for illustration, covers fourteen pages, well illustrated, and is very much fuller in detail than any of the chapters we see on the subject in the works on anatomy or physiology. The section on Fractures covers twenty-two pages; on Gonorrhœa, fifteen pages; Hernia, twenty-eight pages, etc., etc. And turning from this consideration to see who are the authors, we find that the best talent of the country has been brought into requisition. We cannot too highly commend a book such as this to any and every practitioner, whether he be one of the busy ones or one who has or finds time for library study and reading.

Spinal Irritation. By WILLIAM A. HAMMOND, M. D., Surgeon-General U. S. Army (Retired List), Professor of Diseases of the Mind and Nervous System, New York Post-Graduate Medical School and Hospital, etc. 1886. George S. Davis, Detroit, Mich. 12mo. Pp. 80. Paper. Price, 25 cents. (From Publisher.)

This is the sixth of the series of "The Physicians' Leisure Library," which we had to notice favorably in our September issue. A better author for the work could not have been selected, since it is chiefly to Dr. Hammond that the credit belongs for having separated this special form of American from the mass of other forms, and for having classified it pathologically as posterior spinal anæmia. This monograph is well presented—being written in that easy, lucid, descriptive style so characteristic of the author and instructive to readers. Every practitioner of medicine should possess himself of this book—especially when so valuable a one for every-day use costs only 25 cents.

Modern Treatment of Eczema. By H. G. PIFFARD, A. M., M. D., Clinical Professor of Dermatology, University of City of New York, etc. 1886. George S. Davis, Detroit, Mich. 12mo. Pp. 54. Paper. Price, 25 cents. (From Publisher.)

This seventh number of "The Physicians' Leisure Library" is in full keeping with the high merit of the preceding issues. Chapter I is on definition and clinical description of eczema; Chapter II discusses its etiology; and Chapters III and IV—by far the greater part of the monograph—gives the general and local treatment of the disease. This little work is thoroughly practical, and treats of the most commonly met-with skin disease as it is usually met with in the rounds of the physician.

Methods of Bacteriological Investigation. By DR. FERDINAND HUEPPE, Docent in Hygiene and Bacteriology, Chemical Laboratory of R. Fresenius, at Wiesbaden. Translated by HERMANN M. BIGGS, M. D., Instructor in Carnegie Laboratory, etc. Illustrated by 31 wood-cuts. New York: D. Appleton & Co. 1886. 12mo. Pp. 218. Cloth. (For sale by West, Johnston & Co., Richmond.)

We have carefully read Dr. Biggs' translation on bacteriological study of Hueppe, and find it a very good reproduction. The latter part of the book on Pure Cultures is very exact and full. That part which treats of Staining is not minute enough, not stating the maximum time the preparation should remain in the staining fluids. The paper is good, and the type large and clear. It is a useful book for practical work. H.

Compend of Pharmacy. By F. E. STEWART, M. D., Ph. G., Quiz-Master and Theoretical Pharmacy, etc. *Based upon Prof. Joseph P. Remington's "Text-Book of Pharmacy."* Philadelphia: P. Blakiston, Son & Co. 1886. Cloth. 12mo. Pp. 196. Price \$1. (For sale by West, Johnston & Co., Richmond.)

This is No. 11, of the "Quiz-Compend Series" to be issued by the popular publisher named in the title. All ten of the preceding numbers of this "Series" have been remarkably well compiled—thoroughly covering every important subject treated; and now this No. 11 on Pharmacy is just as perfect. To students or apothecaries, as well as physicians preparing for examinations, or as a guide in the lecture-room or in the pharmaceutical laboratory, this book would seem to be almost invaluable. Besides a well arranged "table of contents," the kind of type and the form of paragraphing very materially aids quick and easy reference to a subject.

VIRGINIA MEDICAL MONTHLY,

[ESTABLISHED APRIL, 1874.]

RICHMOND, VA.

SUBSCRIPTION, \$3.00 per annum.....SINGLE COPIES, 30 cents.

LANDON B. EDWARDS, M. D.....EDITOR AND PROPRIETOR.

Original Contributions solicited from all sections; but the Editor does not hold himself responsible for the views of authors.

Articles contributed to the pages of this Journal must not be duplicated in other journals by the author without proper credit being given to the Virginia Medical Monthly.

Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

Removal of Office of the Editor.

The Editor of this journal has removed his office and residence to No. 106 West Grace Street, Richmond, Va.

Medical Society of Virginia.

The Announcement of the Seventeenth Annual Session of the Medical Society of Virginia has been issued to every Fellow; and the correspondence in the hands of the Secretary indicates that the session will exceed expectations of a year ago in regard to the value and importance of the proceedings. As we look at the promotion of professional interests accomplished by means of this organization, we cannot understand how any worthy practitioner in the State can consent to remain out of fellowship with it—not to have a voice in its proceedings. By far a majority of the qualified doctors of Virginia are already members; and hence, practically speaking, whatever action the Society may take in regard to any proposition, must of necessity bind those who are not fellows. Does not common sense, therefore, suggest the propriety to “outsiders” of at once joining the organization and take part in framing those laws which sooner or later they will be made to obey? Surely a great many could not have properly considered the matter. Let them wake up from their dormancy, and take the world as

they find it, and go forward improving on the improvements which have been made until perfection shall come into view.

A singular effect which we have observed, as a result of the Virginia State organization, is the great decrease of croakers and croaking. Such things have been set aside by the push of earnest workers who are toiling on to establish the correctness of old views or to disapprove them upon their merit. The profession of the present age is working on established foundations, or is seeking to build them. Drones must be laid on the shelf. Seeing these things to be the tidal wave, it is simply ridiculously childish to attempt to stand still and thus hope to save ourselves from wreck.

The approaching session promises to be one of special interest and profit to those who attend. Some visitors of eminence from other States are expected to be in attendance, who will add interest to the session by papers and participation in debates. A large number of additions to the membership of the Society will be made. And we need not speak of the hospitable features that will be manifest in a city so noted for hospitalities as Fredericksburg. It even offered a "warm reception" to the Union soldiers "during the times of the war." It will do better things now to every attendant upon the session of the Medical Society of Virginia.

American Rhinological Association.

The Fourth Annual Meeting of this wide-awake Association will be held in St. Louis, October 5th, 6th and 7th. Dr. A. De Villiss, of Toledo, Ohio, President. A number of papers are announced that are of practical interest to general physicians. Among such is one by the Secretary and Treasurer, Dr. P. W. Logan, of Knoxville, Tenn., on "A Mixed Form of Atrophic and Hypertrophic Catarrhal Inflammation (heretofore undescribed) and its Treatment"; another by Dr. Thos. F. Rumbold, of St. Louis, on the *Treatment of Pruritic Catarrh* (Hay Fever), etc.

Richmond Medical and Surgical Society.

We regret very much not having room in this issue to report the recent proceedings of this wide-awake and progressive Society. As indicative, however, of its public spirit, it may be worthy of record, that as soon as the disasters of earthquake at Charleston, S. C., were made known, this Society immediately held a largely-attended called meeting, in

the office of Dr. Landon B. Edwards, and ordered the following telegram to be sent:

"To *Dr. F. Peyre Porcher*, or *Capt. F. W. Dawson*, Charleston, S. C.:

"The Richmond Medical and Surgical Society tenders sympathy and professional services. If any doctors are needed, telegraph us how many, and we will bear all expenses."

(Signed), JOHN G. SKELTON, M. D., *President*.
J. F. WINN, *Secretary pro tem*.

A number of the best qualified practitioners volunteered to go on a moment's notice.

The replies to the telegram by telegram and by letter manifested the highest appreciation of the offer, but stated that it was hoped the Charleston surgeons would be able to fill the demand for professional work.

The Retreat for the Sick :

Is the only general hospital for pay patients in the city where patients can select their own physician or surgeon. It is an excellent institution for the sick, under the management of a Board of Christian ladies. It has also a charity feature for the deserving. We call special attention to the full-page advertisement of it in this issue.

Dr. Wm. F. Drewry,

lately of Boykin's, Va., has been elected during the past month to the position of Second Assistant Physician in the Central Lunatic Asylum, Petersburg, Va. We are pleased to record that this is regarded by the friends of this institution as a very excellent selection.

Virginia State Board of Medical Examiners.

The good work done by this Board—the creature of the Medical Society of Virginia—is beginning to be manifest in a better tone of professional opinion, growing out of a higher standard of qualifications than formerly. Quackery and charlatanism are dying out, and the competition for professional rank is becoming based upon a measure of attainments of doctors, and not upon the "tricks of trade" which dwarf any scientific study and debases the participants. The Medical Society of Virginia should watch every action of the Board with an affectionately jealous eye; and when

called upon to fill vacancies in the Board, it should select only the most competent and suitable physicians to the honor of a Medical Examiner. Cunning politicians and scheming partizans of all kinds and degrees should be kept out of the Board—allowing fitness and worthiness only to guide the vote.

Since the report given in our May, 1886, issue, when there were sixty-six physicians who had passed the examinations by the Board, the following named nineteen doctors have been examined and granted certificates to practice, thus making a total to date of eighty-five:

LIST OF PHYSICIANS

Licensed by State Medical Examining Board of Virginia since close of Spring Session, April 9th, 1886.

NAME.	P. O. ADDRESS.	COLLEGE OF GRADUATION.
I. P. Bishop,	Millbank, Va.,	College Phys. and Surg., Balto., Md.
R. Lee Bowcock,	Keswick, Va.,	University of Virginia.
E. L. Detwiler,	Herndon, Va.,	Jeff. Med. College, Philadelphia, Pa.
E. W. P. Downing,	Hadlock, Va.,	College Phys. and Surg., Balto., Md.
B. F. French,	Cincinnati, O.,	Hahneman Homœopathic Med. College, Philadelphia, Pa.
Sumpter George,	Midland, Va.,	University of City of New York.
Stonewall J. Gill,	Lowesville, Va.,	Vanderbilt University.
F. S. Groseclose,	Leplo, Va.,	Ky. School of Med., Louisville, Ky.
Jas. A. Hathaway,	The Plains, Va.,	Col. Phys. and Surg., New York City.
H. E. Jones,	Nebraska, Va.,	University of Virginia.
Geo. P. Martin,	Snow Creek, Va.,	Louisville Medical College, Ky.
W. E. McGuire,	Richmond, Va.,	University of Virginia.
Chas. W. Pritchett,	Mt. Cross, Va.,	College Phys. and Surg., Balto., Md.
W. R. Punis,	Alexandria, Va.,	Jeff. Med. College, Philadelphia, Pa.
C. W. Rogers,	Meadowdale, Va.,	University of Virginia.
W. M. Seward,	Hopeville, Va.,	University of Virginia.
W. F. Smith,	Madison C. H., Va.,	Jeff. Med. College, Philadelphia, Pa.
A. W. Terrell,	Lynchburg, Va.	
W. B. Thornhill,	Lynchburg, Va.,	Hospital Coll. Med., Louisville, Ky.

Four applicants have been rejected, representing three prominent Medical Colleges.

Official.

HUGH T. NELSON, M. D.,
Secy. and Treas. Medical Examining Board of Va.

We take pleasure in publishing the following official announcement of the Semi-Annual Session of the Board:

OFFICE SECRETARY STATE MED. EXAM. BOARD OF VA.,

CHARLOTTESVILLE, VA., October 1st, 1886.

The Medical Examining Board of Virginia will convene at Fredericksburg, Va., in the Opera House, at 10 A. M., Tuesday, October 26th, 1886.

By order of

H. GREY LATHAM, *Vice President, Acting President,*
HUGH T. NELSON, M. D., *Secretary and Treasurer.*

Dr. Hunter McGuire

Is homeward bound from England, where he has been making his Summer vacation. He will return to professional duty at his home in Richmond during the first week in October. St. Luke's Hospital is already filled with patients awaiting his arrival.

Reed & Carnrick's Diet Tables.

We wish to express our highest appreciation of the "Diet Tables" being issued by Messrs. Reed & Carnrick, of New York city. A carefully selected list of articles, approved by the profession and by experience, is put on a leaf with the name of the disease to which the special diet is applicable. One of such leaves is torn out and left with the family or nurse. These leaves will be supplied without cost on application to Messrs. Reed & Carnrick, who deserve so much credit for having introduced Beef Peptinoids, etc.

Engraving and Sketch of Dr. Edward Warren-Bey.

None of our readers are more disappointed than we in not being able to present in this issue the engraving and biographical sketch of this distinguished surgeon, whose fame now fills at least three continents. As we are going to press, we have a letter from Dr. Warren-Bey, stating that he had a picture made in London, but it proved to be so poor that he had to refuse it. He is having another made in Paris, which he promises to have forwarded to us so soon as it is ready, which we hope will not be far distant—a month or two. But the rare excellence of some of the articles in this number will in a measure compensate for the disappointment in regard to the picture and sketch.

The November Number

Of this journal will probably be delayed a few days because of the absence of the Editor upon the Session of the Medical Society of Virginia—October 26th–29th. We wish at least to furnish some notes of this Session in the November number.

Dr. Joseph A. White,

Surgeon to the Richmond Eye, Ear and Throat Infirmary, has been honored with the appointment as one of the Vice-Presidents of the Ophthalmological Section of the International Medical Congress—a high compliment and a good selection.

VIRGINIA MEDICAL MONTHLY.

VOLUME XIII—No. 8.

WHOLE NUMBER, 152.

RICHMOND, NOVEMBER, 1886.

Original Communications.

ART. I.—**Considerations on the Pathology and Treatment of Anæmic Conditions of the Spinal Cord and its Membranes.**
By J. LEONARD CORNING, M. D., Consultant in Nervous Diseases to St. Francis Hospital, etc., New York, N. Y.

It is evident that, if the vascular apparatus of the cord be so constituted as to admit of congestion, the existence of the opposite condition of anæmia must be equally within the range of possibility. Moreover, it is equally clear that, according to whether the anæmia be circumscribed or diffuse in character, will be the extent and character of the symptoms. Thus, if the cord be affected by anæmia throughout its entire extent, we shall find symptoms pointing to derangements in the centres situated in the medulla, in the dorsal and lumbar cord, and perchance in the brain itself. Again, if the congestion be more strongly marked in certain physiological districts of the cord than in others, it is but natural to anticipate a more pronounced derangement of the corresponding functions. Thus, if the anæmia is more pronounced in the anterior and lateral columns of the cord than elsewhere, we should anticipate a clinical picture, in which

motor derangements would stand forth with special prominence. But if, on the other hand, there be a pronounced depletion of the posterior columns of the cord, we should confidently anticipate that sensory disturbances would lend a characteristic imprint to the disease. Though it is well to bear in mind the possible variations in symptomatology, which may arise from an unequal distribution of circulatory anomalies within the cord, it would be premature, in the present state of our knowledge, to establish a classification of the circulatory affections of the cord, based upon purely hypothetical grounds.

In the following considerations of spinal anæmia, therefore, we shall content ourselves with a general description of symptoms, avoiding all attempts at an arbitrary classification. Moreover, since the pathological observations at our disposal are, to say the least, extremely meagre, it will be well, in the analysis and codification of symptoms, to seek light from the results of experimental observation. The admissibility of such a course will readily appear to any one at all familiar with the numerous and conflicting opinions entertained by various writers with regard to what really constitute the clinical manifestations of spinal anæmia.

Causation.—Spinal anæmia may be produced by a variety of causes. Thrombosis and embolism of one or several arteries of the cord may cause local ischæmia; but it is probable that such effects must always be more or less circumscribed in character, on account of the anastomotic facilities of these vessels. Atheroma may also produce anæmia of the cord. Compression or thrombosis of the abdominal aorta above the origin of the lumbar arteries, as in Gull's case, produces instantaneous anæmia of the cord, and consequent paraplegia. The ischæmia of the cord ascribed by Brown-Séquard to *vaso-motor* causes, and which is assumed by that observer to be the cause of so-called reflex paralysis, is still known to us only through inferential sources. When, however, we consider the intimate relation existing between the vaso-motor system and the nervous centres as a whole, and when we also take into account the profound influence exercised upon the brain and inferior segments of the cord,

by excitation of the peripheral nerves (as exemplified in sexual excesses and certain forms of epilepsy), there is certainly strong ground for reckoning vaso-motor anomalies among the causative factors of anæmia of the cord.

All forms of disease which result in diminution and deterioration of the blood may give rise to anæmia of the cord. A bloodless, pale condition of the cord is, indeed, frequently found in conjunction with the most varied organic affections.

Great loss of blood from wounds or severe parturition has frequently caused paraplegia of the lower extremities. Such paralytic symptoms are undoubtedly attributable to the anæmic condition of the inferior portion of the cord, and they may be produced artificially by compression or ligation of the abdominal aorta.

Experimental and Pathological Data.—The first experimental observation of importance in connection with the subject is that of Stenon,* an account of which was published in 1667. On passing a ligature around the abdominal aorta in fishes, this investigator observed that when the knot was tightened, the caudal extremity of the animal became paralyzed, whereas relaxation of the same was followed by a gradual restoration of muscular power. Subsequently this procedure was repeated by a number of experiments, notably by Haller, Schiffer,† and Weil.‡ The latter observer showed in a most conclusive manner that the paralytic phenomena were caused by the anæmia of the lumbar portion of the cord. Kussmaul and Tenner§ have slightly varied these experiments, but have arrived at substantially the same results. In their experiments the subclavian arteries were tied, and compression applied to the descending portion of the arch of the aorta. It will thus be seen that the circulation in the carotids remained unimpeded, while the ligature

* N. Stenon, *Element, Myologiæ Specimens*, Flor., 1667. Vide also Haller, *Elementa Physiologiæ*, Tome IV, 1762. Cited by Erb, Ross, and others.

† Schiffer, "Über die Bedeutung des Stenonschen Versuches. *Centralblatt für die medicinischen Wissenschaften*, 1869, pp. 579 and 593.

‡ Weil, *Der Stenonsche Versuch Dissertation Strassburg*, 1873.

§ Kussmaul und Tenner, *Untersuchung über Ursprung und Wesen der fallsuchtartigen Zuckungen bei Verblutungen*, etc. Molesch, *Unters zur Naturl.*, Bd. III, 1857.

about the subclavian was placed in such a manner as to interrupt the circulation in the vertebral arteries. As a result of these manipulations, paralysis of the lower extremities was produced in less than two minutes, and as the anæmia became manifest in the upper portion of the cord, respiration was interrupted, and finally completely arrested, death resulting from asphyxia. These experiments show conclusively that the functions of the cord, like those of the cerebrum, are immediately dependent upon the integrity of the circulation for their continuance. They open, moreover, vast possibilities in therapeutics, which have as yet been but imperfectly realized.

The pathological appearances in case of spinal anæmia are as follows: "Those portions of the cord which are inadequately supplied with blood are pale in appearance, and exhibit few or no points of blood on section. The white substance is frequently soft in consistency, while the gray matter is less pronounced in color than normal, and subsides below the level of the surrounding tissue. The membranes also share in the anæmia; they are difficult of discernment, and present a pale, dull appearance; and examination of the vessels shows the latter to be almost or entirely empty.

Where general anæmia is present, the cord is almost invariably found to be more or less bloodless. On the other hand, where thrombosis and embolism are present, the districts supplied by the occluded artery are the seat of red softening, and the tissue in the immediate neighborhood is in a state of congestion.*

Symptoms.—When the blood supply to the cord is suddenly interrupted, as in embolism, compression or ligation of the abdominal aorta, paralysis and anæsthesia of the lower extremities are developed with great rapidity.

The case published by Mr. Gull† is an excellent example of this. We have also seen that a like condition may be

*Vide Tuckwell. "Some Remarks on Maniacal Chorea and its Probable Connection with Embolism." *British and Foreign Medico-Chirurgical Review*, Oct., 1867. Also Erb, *Diseases of the Spinal Cord and Medulla Oblongata*. *Ziemssen's Cyclopædia*, 1878. Ross, *op. cit.*, p. 134.

†Gull. "Paraplegia from Obstruction of the Abdominal Aorta." *Reports of Guy's Hospital*, Vol. III, 1858.

evoked in animals by simple ligation or compression of the aorta, and that the symptoms of motor and sensory paralysis rapidly subside, when the obstructions to the arterial circulation are removed. If, on the other hand, the anæmia is gradually developed, as in certain debilitating disorders, all the symptoms are less pronounced in character. The subject complains of more or less weakness in the lower extremities, which leads him to eschew walking as much as possible; and even inconsiderable muscular exertion causes trembling of the limbs. Sometimes these symptoms are accompanied by various aberrations of sensation—formication, hyperæsthesia and slight anæsthesia being frequently observed. In the majority of these cases, however, motility and sensibility are not profoundly affected, and it is only when the circulatory obstruction is considerable that pronounced anæsthesia and paralysis are encountered. It is an interesting fact that the reflexes are often considerably exaggerated, while the sphincters do not usually share in the paresis.

The so-called reflex paralyses which sometimes occur in the course of diseases of the uterus, bladder, and digestive apparatus have been referred by Stanley, Graves, and others, to a cessation of the sensory influence of the sympathetic system.* Brown-Séquard, however, regards them as the result of persistent irritation of the peripheral (genito-urinary) organs, which gives rise to secondary contraction of the vessels of the cord, with resultant malnutrition of the adjacent parts.

It is true that a careful examination of the cases reported as instances of reflex paralysis reveals the fact that not a few of the latter were associated with demonstrable lesions of the cord. Gull, Kussmaul, Fournier, Feinberg, and others, have reported such cases. On the other hand, however, evidence is not wanting in support of the hypothesis advanced by Brown Séquard. To recapitulate all that might be advanced in support of the theory would, however, exceed the limits allowed by the present publication; and I will, therefore, merely state that Zonant has published a case in which un-

* Vide, Rosenthal, *op. cit.*, p. 152.

consciousness and paraplegia were reduced by cauterization of the uterine cervix; that Rosenthal mentions the case of a girl who suffered for three weeks from paresis of the legs, and who recovered after the removal of a needle from the walls of the vagina; and that Landry observed a patient in whom the paralysis disappeared after reposition of the deflected uterus. Every practitioner of experience will doubtless be able to recall similar cases.

While endorsing Dr. Brown-Séquard's theory in the main, I cannot help feeling that, besides the spinal anæmia, there is also an element of shock in these cases, which may be assumed to be transmitted directly to the cells of the cord through the intermediation of the sensory nerves. It is quite conceivable, also, that secondary changes may sometimes take place in the cord, and that this circumstance accounts for the more permanent character of the symptoms in some of these cases.

On the whole, I am inclined to differ with Rosenthal when he expresses the opinion that "functional reflex paralysees constitute very rare exceptions." But while admitting this, I would at the same time enter a word of protest against the tendency which is so rife among certain specialists, of ascribing every obscure or transitory spinal symptoms to reflex causes.

From what has already been said it is manifest that the *duration* of the affection will depend largely upon the causes which predispose to the occurrence of anæmia in the cord. Where it is induced by severe hæmorrhage or embolism, the onset is sudden; but recovery may take place with comparative rapidity, provided the collateral circulation becomes readily established. Sometimes, however, secondary softening occurs after embolism, and recovery, under these circumstances, is of course impossible. Where the anæmia is the result of chlorosis the outset of the affection is slow and recovery proportionately retarded.

Treatment.—It is of the first importance to ascertain the causes which predispose to the anæmia. In some cases this will be found to be impossible, while in others, the previous history and general condition of the patient will afford val-

uable etiological information. Where there is manifest general debility an appropriate tonic treatment should be combined with over-feeding and rest. Iron may be given, where the condition of the digestive apparatus is good and strychnine has been commended by several excellent authorities. Such food as the subject is able to take should be of the most nutritious character, and preference should be given to a *ménù* consisting in the main of rare meats and unbolted cereals (cracked wheat, oatmeal, brown bread, etc). If possible, the subject should remain upon his back from twelve to fifteen hours each day, the limbs being either elevated upon cushions, or still better,* wrapped in moderately tight Esmarch bandages. Where compressed air-baths are available they should be prescribed three or four times a week; or in default of these, the patient should be sent to the sea-side, after previously undergoing a course of appropriate preparatory treatment. Generally, faradization of the entire body, combined with the ascending galvanic current to the spine, will be found useful.

The alternate application of hot and cold to the spine, by means of the douche, often yields good results. Too much cannot be said in favor of Dr. Chapman's spinal bags, which being filled with hot water, and replenished from time to time, are allowed to remain in place for several hours.

Sexual indulgence should be much restricted or entirely abandoned during treatment.

The success attainable in this, as in other functional disturbances of the cord, will depend not a little upon the tact and address displayed by the attending physician. Especially is this the case where the spinal manifestations are associated with marked symptoms of depression.

26 West, 47th Street.

* It is evident that the application of bandages to the lower extremities tends to restrict the blood-flow to those parts, and increased pressure in the vessels of the cord is the inevitable result. I have frequently had recourse to this expedient.

I am using Kennedy's *Pinus Canadensis* and like it very much.
H. ALLEN, M. D., Placerville, Col.

ART. II.—**Remarks on the Mode of Action of Oil of Turpentine in the Cure of the Pain of Burns.** By ROBERT BIRD, M. D.,
Brigade Surgeon East Indian Army (Retired), etc., Cobham, Va.

“When the end of a poker is thrust into the fire it is heated; the molecules in contact with the fire are thrown into a state of more intense oscillation; the swinging atoms strike their neighbors; these again theirs, and thus the molecular music rings along the bar. The motion in this instance is communicated from atom to atom of the poker, and finally appears at its most distant end. If we now lay hold of the poker, its motion is communicated to the nerves and produces pain; the bar is what is called hot, and the hand in popular language is burned. This molecular transfer, which consists in each atom taking up the motion of its neighbors and sending it on to others, is called the conduction of heat.”¹

As the impression made by heat on the peripheral extremities of the nerves instantaneously arrives in the brain, its mode of progress along the nerve can scarcely be the same as that of conduction, which is comparatively slow. Heat modified by contact with the antimony and bismuth of a thermo-electric pile becomes electricity, and travels at an increased rate of speed along a wire; and similarly, the same force entering the nerve from the poker, is so modified or converted through contact with the living molecules of the structure as to be able to travel inwards to the brain at an increased rate of speed. The motion ceasing to be heat has become elaborated and vitalized, as it were, into what is probably the lowest form of nerve force, and has acquired new properties.²

By means of different—structurally different—materials, shaped and arranged in certain ways—that is, by the help of apparatus and instruments—we can extensively control, modify and transmute the physical forces of our surroundings. In the action of a simple voltaic circuit consisting of, a single pair of plates of zinc and platinum, the chemical

¹ Tyndall on *Heat*, Chapt., VII.

² See author's paper on the “Transmutation of Heat into Nerve Force,” *Medical News*, 15, August 1882, and his other paper on the “Nature of Nerve Force,” *Indian Medical Gazette*, August, 1885.

action between the zinc and the acid sets electricity free, but there is no direct manifestation of this till we break the circuit, when a bright spark appears which is *light*. Next, if a voltameter, charged with a solution of sulphate of copper, be interposed in the circuit between two electrodes of copper, a certain quantity of copper corresponding to the zinc, which is being dissolved in the battery, will be deposited on one electrode, whilst a corresponding amount of copper will be dissolved from the other electrode. Here we have chemical action or force. Again, if the connecting wire be coiled around a piece of soft iron, the iron will become powerfully magnetic for the time during which the current is traversing the conducting wire. This is magnetism. Finally, if whilst the voltameter, the electro-magnet and the galvanometer are still included in the circuit, part of the circuit be composed of a thin wire which traverses the bulb of a Harris's air thermometer, an elevation of temperature in the wire will be obtained, so that, in the limited area of a circuit, constituted of the simple apparatus above described, we have chemical affinity setting free electricity, which in quick succession generates light, chemical force, magnetism and heat.

But it is to be specially noted that it does so through the medium of substances which very distinctly differ, both materially and structurally.¹ When the vibrations of heat leave the poker, and impinge on the skin, they must traverse the structures of the epidermis and cutis vera before reaching the nerves, which are to transmit them in an altered form to the brain. Where the elementary structures constituting these tissues are modified, (as they seem to be in these localities where they overlie the gustatory papillæ) to answer the requirements of sensation, the modification takes the form of hairs and such like elongated processes which appear to be better adapted to take up the vibrations of their own special surroundings, than they are to transform these when received. Once on the inner side of the skin, the vibrations strike on, and enter the extremities of the nerves.

¹ Miller's *Chemical Physics*.

The extreme peripheric ends of these, are either club-shaped as in the tactile corpuscles, or they resemble attenuated threads as they do in the papillæ of ordinary sensation. As they recede inwards towards the center, both of these assume the three elementary structures of which all medullary nerves are composed, viz., the neurilemma, the cylinder or white substance of Schwann, and the axis cylinder or core. The first is a protective sheath to the other two, and a field for the distribution of the vessels engaged in nourishing the nerve fibre; while the office of the latter two is the transmission and transformation of force vibrations.

The several portions of the apparatus used to illustrate, and cause the transformation of electricity into four of the other physical forces differed in many particulars, the one from the other; so in like manner the medullary cylinder differs in many particulars—chemical, structural and physical—from the axis which it contains. The one is oleaginous and largely soluble in ether; the other is albuminous and insoluble in ether; the former is viscous, possesses in its structure nuclei regularly disposed in albuminous beds, and is at regular intervals divided or marked off into segments by constricting bands—thickenings of the neurilemma—the other is uniform, homogeneous and granular or fibrous in its intimate molecular arrangement. Finally, the axis cylinder, in common with other albuminous structures, polarizes light circularly, while the cylinder itself presents such peculiar appearances in polarized light as led Klebs to maintain that “it consists of or contains crystalline particles, which are doubly refracting, and whose optic axes are arranged radially to the primitive band.” In other words, while the axes or core seems to be physically better adapted to transmit vibrations, the cylinder appears to be physically suited to modify or transmute them. When the heat vibrations from the poker which enter the nerve are moderate in quantity and in intensity, they are readily transformed and transmitted to the centres, where they originate the impression of agreeable warmth. In this case the transformation is physiologically complete, and a purely physical force has apparently ascended in the scale of forces and become, as it

were, vitalized—*i.e.*, a physical force has become a physiological force.¹

But as the amount and intensity of the heat vibrations increase, the nerve becomes functionally incompetent to discharge the labor imposed upon it; that is, its various structures are unable to transmute and transmit with sufficient rapidity. The result of this is, a portion only of the vibrations is modified physiologically—perhaps imperfectly so—while the remainder progresses physically and begins to advance along the nerve on the principles of ordinary conduction, and the collective impression now made on the brain is that of actual pain, which amounts to the pain of burning, when the advancing vibrations cause the molecules of the axes cylinder to strike against each other with sufficient swing and emphasis.

John Hunter, having immersed a dead and a living penis in the same dish of hot water, found that the temperature of the former rose more quickly and higher than did the temperature of the live one; also that the water surrounding the latter cooled down quicker than the water surrounding the former. Then Mr. Tyndall (when studying the subject of calorescence), brought his eye into a focus of heat rays sufficient to heat platinum foil to a glow, and he did so without damaging his eye. Both of these experiments, it appears to me, are to be explained by a reference to the power, possessed by nerves of transforming ordinary heat vibrations into a motion which is not heat—that power which is here being attributed to nerves of ordinary sensation.

The pain established in a nerve or nerves by the heat vibrations received from a hot poker can be speedily relieved and cured by oil of turpentine copiously applied over the seat of pain. Cold water continuously applied will also alleviate or cure the pain, but this remedy seems to act either, by absorbing altogether the molecular motion which constitutes the pain, or by changing the current of the nerve force so that it shall flow from the centre towards the periphery,

¹This question was discussed partially by the author in his paper "Further Remarks on the Retinal Spectrum." *Vide Virginia Medical Monthly*, for January 1884, and in his paper on the "Nature of Nerve Force," previously referred to.

instead of from the periphery towards the centre. Turpentine does not act in this way inasmuch as it communicates a motion to the nerves characteristic of itself; a pleasing sensation of warmth is at once perceived on its application to a part, while its internal administration is not unfrequently followed by symptoms which show that the nerves are powerfully acted on. It convulses and kills dogs; Dr. Duncan has seen it produce a kind of trance, lasting twenty-four hours, while in other instances it produces a disordered state of the intellect resembling intoxication. Then it has for long been administered in cases where nervines are indicated—in cases of sciatica, facial neuralgia, epilepsy and hysteria, in obstinate constipation, where nervines are often the most effective remedies, and as a liniment in cases of rheumatism and neuralgia of the extremities.¹ Further, Mr. Paget,² when studying the rise of inflammation made use of turpentine to excite the condition. It is probable, therefore, that in the cure of the pain of burns, the motion characteristic of it, which it excites in the affected nerves, aids and facilitates the ordinary function of the medullary cylinder in the transformation and elaboration of the heat vibrations. The result of this is, the heat vibration which is advancing along the fibre by conduction, is now rapidly vitalized and transmitted to the brain, where it replaces the sensation of pain with the sensation of agreeable warmth.

Light, heat and sound travel by waves linearly arranged, which may differ from each other in size, disposition and direction of vibration. Now, the more the subject is examined the more certain it appears to grow, that, all forms of progress known to the physical forces in inorganic matter, have their correspondents or representative forms in organized animal tissues; and it is exceedingly probable that most or all of these modes of motion are represented in the nerves of touch and ordinary sensation, while these are engaged in the discharge of their special functions. It can scarcely be doubted that differences in the texture, temperature, and indeed in all the qualities

¹See *Pereira's Materia Medica*.

²*Surgical Pathology. Lecture xiii.*

of things, are each and all made clear to our consciousness through the medium of differences in the size, the form and disposition of the vibrations in the nerve fibres which carry the messages. The waves or vibrations arising from tickling differ in many respects from those produced by scratching; and those flowing from gentle contact with velvet are assuredly not the same as those streaming from rough contact with sandpaper.

The mode of action of turpentine in the cure of pain is necessarily physiological. Still, for purposes of illustration, it may be compared with processes which are purely physical; and the experiment which throws most light on it, and to which it offers the closest analogy and parallel, is the magnetization of light according to Faraday's method. Arrange a bar of glass, properly prepared and cut, between two nicol prisms, so that the polarized beam emerging from the first nicol will traverse its long axis. The beam continues to be arrested in the second nicol, while the prisms remain crossed with reference to each other, or until the glass, in which the beam is lying, as it were, is magnetized. When this is done the arrested light immediately appears on the other side of the analyzer, or second prism. But it appears as colored, not as white light, and rotation of the analyzer shows that the coloring has resulted from circular polarization of the white beam. In this experiment the heat which is produced in the analyzer from the arrested progress of the light represents, in the physiological experiment, that molecular vibration on which the pain depends; while the circular flow of the light following magnetization corresponds to the modification of these same vibrations, which, resulting in a quicker, softer flow towards the centre, ends in cure. On the other hand those forces, embodied in the turpentine, which work the cure, correspond to the magnetism in the glass.

Many other essential oils besides turpentine have the double capacity of circularly polarizing light and curing neuralgic pain. The most of these are also powerful absorbers of radiant heat. We use oil of cloves, cinnamon, peppermint, carraway, etc., to cure gripes or to prevent them.

Oil of cloves is a popular remedy for toothache, and the Chinese extensively employ oil of cinnamon in the cure or alleviation of facial neuralgia. Then how many essential oils are used in the manufacture of the many perfumes so copiously used by delicate women, who suffer from nervous pains—pains so varied and so numerous as to baffle the physician, not only in his attempts to cure them, but to name them! In the preparation of eau de cologne alone, the essential oils of lavender, bergamot, lemon, neroli cinnamon, rosemary and balm are used. Dr. Miller, in the January number of this journal for 1886, recommended oil of sassafras for the cure of neuralgia in beasts as well as in man; and allusion may be made here to a case published by the writer some years ago, which bears a similar significance. This was a case of faceache repeatedly caused by listening to a saw as it was being sharpened, and as frequently cured by the external application of oil of peppermint.¹

Turpentine, in addition to curing the pains of burns and of neuralgia, affords immediate relief from the intolerable itching of the prickly heat which is so prevalent among new arrivals in tropical countries. Its application in these cases almost immediately substitutes a warm, pleasant glow for the “pins and needles” sensation characteristic of the complaint.

Other instances of change or of modification being induced in the existing motion of a structure or tissue by the introduction of another motion are on record. Thus Linz found that all the metals continued to decrease in conductivity as the temperature rose to 400,° and Dr. Robinson proved that the diminution continued as they were raised progressively to a red and even to a white heat.

Again the electro-tonic state in a nerve modifies its capacity to transmit impressions. Dr. Rutherford found that “if currents of medium strength be used instead of the strong ones employed by V. Bezold, the negative pole quickens the rate at which the nervous influence is transmitted, whilst the positive pole retards it;” or, in other words, a stream of electricity passing along the nerves in its positive

¹“On Sound as a Cause of Disease.” *Indian Medical Gazette*, April, 1874.

phase hinders the flow of the nerve force, and in its negative phase helps it. Further, Du Bois-Reymond, when experimenting on the electrical phenomena of nerves, discovered that when a piece of hot metal was brought near to the nerve without touching it, the nervous current was seen to diminish rapidly and to have its direction reversed. At this time he was experimenting with a piece of nerve laid on the electrodes of a galvanometer, touching one of these with its longitudinal surface, and the other with its transverse section. More homely instances having a similar significance are also available. Thus we administer sweetmeats to a child after a dose of medicine; here the molecular vibration induced in the gustatory nerve by the one is modified or superseded by the molecular vibration excited by the other. When our bodies itch we scratch them, and when they tingle we rub them, in order that the vibrations of scratching and rubbing may modify or supersede the vibrations of itching and tingling. And in a paper published recently in this journal,¹ it was shown how the wave motion of one light in the retina supersedes or changes into the wave motion of another light. When adducing these instances of replacement of one motion by another, it is not forgotten that different wave motions may co-exist in the same structure; for instance, light, heat and sound may traverse glass synchronously, and, as it were, side by side.

Before concluding, allusion may be made to a recorded pathological condition, which, in some of its phases, bears a close resemblance to the one discussed in these pages. Mr. Paget was the subject of it; and the case may be described in his own words: "Whoever has worked much with the microscope may have been conscious of some amount of inflammation of the conjunctiva in consequence of overwork. Now, the stimulus exciting this inflammation has been indirectly applied to the retina alone; and I have often had a slightly inflamed left conjunctiva after long working with the right eye, while the left eye has been all the time closed. I know not how such an inflammation of the conjunctiva can be explained, except on the supposition that the excited

¹January, 1885.

state of the optic nerve is transferred or communicated to the filaments of the nerves of the conjunctiva, generating in them such a state as interferes with their nutrition. * *

* * * Effects which we cannot ascribe to any alteration in the blood or the size of the vessels."

In describing here the rise of a simple pathological condition, and its decline into cure, the established principles of physics have been freely drawn out. The adoption of this mode of explanation has some advantages, for it not only enables us to explain that which ordinary medical principles are unable to explain, but it tends to widen the field of etiology. Having seen how simple heat vibration may lead to a pathological condition in the structure of a nerve of ordinary sensation, we naturally inquire whether other kinds of wave motion may not lead to other pathological conditions in other nerves, or, as in Mr. Paget's case, in tissues remote from the vibrating nerves? As the untouched strings of a piano vibrate to the viewless streams of wave motion in a hall-room, each vibrating to that with which it is in harmony, so are our nerves continually vibrating to the viewless streams of wave motion in our surroundings, each to that with which it is in harmony—streams which give us health when acting moderately, and disease when acting excessively. Nor is the analysis of the wave motion of our environment a light labor, for the general whole is very complex, and made up of many elements—elements whose sources lie widely apart, and whose essential characteristics may be atmospheric, terrestrial, cosmic, or even seismic.¹ Here, indeed, is a wide field, where the industry and skillfully applied enthusiasm of the etiologist are certain to meet with a superabundant award.

¹"There are various general constitutions, of years, that owe their origin neither to heat, cold, dryness nor moisture, but rather depend upon a certain secret and inexplicable alteration in the bowels of the earth." *Wallis's Edition of Sydenham's Works*, Vol. I, p. 8.

I am using Kennedy's *Pinus Canadensis* largely and with great success.

L. C. TULLIE, M. D.

New York, N. Y.

ART. III.--**Remarks on the Pathology of Shock.*** By W. EDWARD MCGUIRE, M. D., Richmond, Va.

The term shock is applied to the nervous force that transmits the effect of injury from the periphery to nerve centres, producing death, or more or less collapse, by this disturbance of the centres. Originally this term was employed, without any definite idea as to its pathology, to any case of collapse or sudden death, following injury or mental emotion, without any discoverable lesion. But lately it has been associated with the nervous system, and it is by means of the increase of knowledge of physiology, and greater extension of experimental inquiries, that we have been enabled to arrive, with some certainty, at the true explanation of the pathology of shock.

Shock, though, as a unit, cannot be defined. The causes of shock, or rather the changes which produce the condition, are so varied that it will be necessary to classify it according to the special pathology bringing about the condition under each head. Consequently, it is proposed to bring before you the pathology of the different kinds of surgical shock, some of which are based on experimental and demonstrable facts; others the views of some authorities as to the explanation of the manner in which the changes to produce this condition may take place; also, it will be necessary to mention physiological facts bearing on this subject, which is the sudden or rapid arrest of normal physiological functions.

Taking the most frequent and important causes of shock, we shall first speak of—

Reflex Inhibition of the Heart.—A reflex act is a transmission of an impulse along an afferent or sensory nerve to a nervous centre, which is thence reflected from this centre along an efferent or motor nerve.

If this nervous centre preside over motion in the part to which the efferent nerve is distributed, it will cause an increase of motion; if the centre preside over *inhibition*, it will cause an arrest or decreased motion in the part to which the

* Read before Richmond Medical and Surgical Society, Oct. 12th, 1886.

effluent nerve is distributed. In the same way the heart may be quickened, stopped, or lessened in force by the stimulation of a sensory nerve.

It has been shown, by microscopic and physiological investigations, that automatic centres are in the walls of the heart, made up of ganglionic cells, like all other origins of nerve force. These centres furnish the stimulus for the rhythmical contraction of the heart, only requiring a continuous blood supply for nutrition to develop the necessary energy.

This intrinsic nerve mechanism is under the immediate control of a group of cells situated in the medulla oblongata called the cardiac centre. This centre can arrest or decrease the action of the heart through fibres which pass along the pneumogastric, or quicken the heart's action through fibres passing along the sympathetic, the inhibitory action being much the more powerful.

It has been proved by experiment that if the pneumogastric or medulla oblongata be stimulated, arrest or diminution of the heart's action follows, the amount depending on the degree of stimulation. But stimulation or irritation of the pneumogastric is not the only way in which the heart's action can be arrested. Many other parts of the nervous system can produce the same effect by a reflex influence.

It is well known to surgeons that wounds of the abdomen are apt to be followed by shock more than any other regions. In this case it is due to a reflex influence on the heart.

Brown-Séquard proved this by his experiments on lower animals. He found that pinching the semilunar ganglion of the abdominal sympathetic stops the action, or diminishes the force of the heart. He found, also, that if the pneumogastric or spinal cord were divided, it had no influence on the heart, thus showing the manner in which the injury to the ganglion produced the effect—viz., that the irritation passed along the spinal cord to the medulla, which was thence reflected along the pneumogastric to the heart. This explains what surgeons have seen to occur in men—that is, cases of death from a blow on the belly. It also shows why collapse follows acute tympanitis. But irritation of the sen-

sitive nerves of the skin and mucous membrane may produce the same effect. It has been found that even a shower-bath affects the pulse, sometimes considerably, while many persons cannot immerse their bodies in cold water without fainting. Drinking ice-water in those not accustomed to it has produced death. It is well known that one danger we cannot guard against while administering chloroform, is the sudden arrest of the heart's action. Here the irritation of the sensitive nerves of the nostrils passes to the medulla, and is reflected through the vagus to the ganglions of the heart, stopping their activity. Carbonic-acid gas, or other irritative substances, may produce the same effect.

Also mental emotions, such as terror, have been known to produce death. Pain has proved fatal, though in the majority of cases by causing syncope while the patient is in a state of collapse. "But still more singular, patients have been known to die at the moment of transition from intense agony to perfect ease, as Sir Ashley Cooper pointed out. Extreme excitement, or deep mental pre-occupation, has the power of postponing the occurrence of shock, perhaps in the same way that the will, or the violent irritation of a sensory nerve, can for a time suspend perception. Another mental condition exerting a peculiar influence on shock is that of intense expectation. It seems that this latter mental condition might assist in explaining those deaths which follow the most trivial operation, while greater accidents may have had no effect. It seems here to follow the breaking off of a condition of extreme mental tension."

Vaso-Motor Paralysis.—It must not be understood that this inhibitory action on the heart always causes death; for it may vary in intensity, from the slightest interference of the force and action to complete arrest. Neither does this disturbance of the heart's action alone generally produce the condition known as shock; for associated with it generally is vaso-motor paralysis.

It has been shown that the blood-vessels—veins as well as arteries—are under a nervous control so closely resembling that already described, that they may be influenced by the same stimuli as those which affect the heart. This might

have been presupposed from the close resemblance of the blood-vessels to the heart, in their primitive development. But the vaso-motor system is not automatic like the heart, nor is it distinct from the central nervous system, the vaso-motor centre being situated in the medulla, with a prolongation down the cord.

These centres are directly connected with the muscular elements of the blood-vessels, by means of the vaso-motor nerves. And from these centres impulses of two distinct kinds may emanate; one increasing the action of the contractile element, causing vasal constriction, the other causing vasal dilatation. The vaso-motor centre in the medulla oblongata is in relation and closely connected with the cardiac centre. So that an impulse passing along an efferent or sensory nerve to the cardiac centre, producing a lessening or arrest of the heart's action, by radiation reaches the vaso-motor centre; thence reflected along the vaso-motor nerves, producing dilatation of the blood-vessels—abdominal vessels especially. This was proved by Goltz's remarkable experiment; and as experiments made by different physiologists do not vary, they have thrown much light upon what was formerly a conjecture.

Systemic Asphyxia.—But it is claimed that inhibition of the heart and vaso-motor paralysis cannot account for all the symptoms of shock, and that it is due to a nervous inhibition of the gaseous interchange which normally goes on between the blood in the capillaries and surrounding tissues, the condition called systemic asphyxia. There seems to be ground for this; for the symptoms of shock are not identical with those of hæmorrhage, under which circumstances they would probably be. And although dilatation of the abdominal vessels leading to passive congestion has been noticed, as in ovariectomy, it does not reach, according to post-mortem records, that extreme degree to account for the severity of the symptoms. Besides, the abdominal vessels, veins, arteries and capillaries are not of sufficient capacity to hold quite sixteen per cent. of the total amount of blood. Moreover, injuries of the cervical spinal cord are not invariably followed by instant death. Although the heart is

very much interfered with, and there is vaso-motor paralysis throughout the whole body.

In this systemic asphyxia, according to Brown-Séquard, the venous blood becomes like arterial blood—deep red, rich in oxygen, and poor in carbonic-acid gas.

Pulmonary asphyxia differs from this, not only in the condition of the blood, but in the absence of convulsions, overfilling the right heart, and the greater duration of irritability of the nervous and muscular system.

Systemic asphyxia, it is claimed, can be the sole cause of shock. Any kind of injury to the nervous system—such as stimulation of the skin and mucous membrane, can produce this inhibition; especially it is said to be the case with burns and scalds, where the area involved is extensive, although the depth be insignificant.

The mechanism through which it is brought about is supposed in this way: The irritation is transmitted along a sensory nerve, producing inhibition of the trophic centres, thereby arresting the chemico-vital changes between the blood and tissues, which is dependent on a trophic influence that passes along the efferent, or motor nerves. In short, then, shock is an example of a reflex inhibition generally affecting all the functions of the nervous system, and not limited to the blood-vessels and heart only; and by the majority of the profession this view is accepted as the most plausible explanation of its pathology.

Among the different theories that should be mentioned is one brought forward by Brown-Séquard, in which he attributes shock to anæmia of the cerebral centres through vasal spasm. He claims that shock is often produced by disturbance of the vaso-motor centres. These being excited by the external injury, cause spasm of the arterioles, especially those at the base of the brain, thereby producing depression of the centres by want of proper nutrition.

An objection has been raised against this view, on the ground that a functional spasm could not remain long enough to produce such a condition. But it has been shown by Dr. Otis that a functional spasm will remain permanent—as long as the exciting cause continues to act. He reports a case of

spasmodic stricture in the membranous portion of the urethra lasting thirty years, caused by irritation of an organic stricture in the penile portion. Moreover, paralysis due to phimosis is a case of reflex irritation, causing anæmia of the spinal cord through vasal spasm, the paralysis lasting as long as the irritation is kept up. So it seems as if he had some grounds to base his opinions, even though opposed by such authorities as Anstie, Jones, and Mitchell.

Anstie believes that shock may be produced by the propagation of shock paralysis of the injured nerves to the cerebral centres. He claims that the state produced in the nerve centres by the peripheral influence is one of paresis from shock depression, and that from this sensory centre this state can communicate itself to motor and vaso-motor centers through commissural fibres. Neither does he believe in a special inhibitory portion of the nervous system. He thinks that the impression produced may be stimulating, if the peripheral irritation be mild, or paralyzing if it be strong.

Weir Mitchell claims that shock may be produced by the state of exhaustion of the centres following over-excitement—being due chiefly to impressions made on the centre by the injury, and partly to mental emotion accompanying every physical injury. He imagines that powerful external irritation exhausts the irritability of the nerves, then that of the centres, thus inducing a state of entire unimpressibility analogous to that which exists in nerves and nerve centres, which are included in a strong, constant current of electricity. For it is well known that nerve tissue treated in this way loses in irritability and rapidity of conduction.

ART. IV.—Treatment of Nasal Growths and Hypertrophies.*

By FRANK DONALDSON, JR., B. A., M. D., sometime Scholar in Biology, Johns Hopkins University; Chief of Clinic for Throat and Chest, University of Maryland; Fellow of the American Laryngological Association, etc., Baltimore, Md.

I would ask your kind attention to a few very practical remarks on the treatment of the so-called hypertrophic nasal catarrh; to the methods now employed in specialty practice

* Read before the Medical Society of Virginia, October 28th, 1886.

for removal of nasal polyps and post-nasal tumors; for the destruction of anterior and posterior hypertrophy of the turbinated bones, and of adenoid vegetations of the pharyngeal vault.

It is safe to say that the only way to permanently remove these *results* of catarrhal inflammation is by surgical procedure, and the three methods now generally employed are :

1. Caustics, chiefly chromic or mono chloracetic acids.
2. The cold snare.
3. The galvano-cautery.

I. *The Removal of Nasal Polypi*.—Numerous methods have been proposed from time to time for the removal of these tumors, but that most often used now is by means of the wire *écraseur*, or cold snare. We have many good snares—Hilton's, Wilde's, Schroetter's, Jarvis', etc., a number of which I have here. The operation is simple, painless, and free from any but slight hæmorrhage. The loop, of course, can be made of any size, and the elasticity of the piano wire enables it to retain its shape after overcoming the obstacles to its introduction. When the polypi are confined to the anterior nares, the wire loop may be passed round them with little difficulty, and the tumor cut through close to its base; when the polyp is situated high up or posteriorly within the nasal fossæ, the procedure is more difficult, and in such case the pistol-shaped snare of Bosworth will be found to facilitate matters. Since the introduction of cocaine all operations on the nose have been greatly simplified, and by a free application of this anæsthetic many polypi may be removed at one sitting. Occasionally, when a large polyp is seen in the posterior nares, and hanging down into the pharynx, it is necessary to pass a silk thread through the nares; the nasal end of the thread is then attached to the loop of the snare, and by pulling upon the lower end of the string the snare is drawn into the naso-pharynx. It may then be slipped over the polyp by manipulation with the operator's fingers.

When this removal of the body is completed the nasal passage should be thoroughly cleansed, and the base of the polyp touched with chromic acid or burned with the galvano-cau-

tery. Finally, this method has great advantages, but there are many cases where the number, size, density, and position of the tumors make their removal with the cold snare well nigh impossible, and, in such cases, it has been my custom to employ the galvano-cautery. The great objection urged against the too free use of the cautery in such cases has been—first, that the battery itself is troublesome and expensive; second, that adjacent and healthy parts may be burned; third, that serious aural complications may follow.

In my own experience these objections do not hold where the cautery is employed to destroy polypi. Beverly Robinson says in this connection: "Where there are many polypi and there is a swollen and hypertrophic condition of the pituitary membrane, it is indicated to make quite an extensive application of the cautery; for it removes more certainly any remains of morbid growths, and renders their recurrence less likely than by any other known method." Morrell Mackenzie, too, "considers it far the best method of treatment."

The galvano-cautery has become such an indispensable agent in specialty practice, and the various batteries now advertised being so expensive and so worthless, I am glad to be able to call attention to a form of battery I have used for some time, and one of which I have here. This is a *Storage battery*. It is convenient, inexpensive, and portable. When well stored, it will last for two months or more, being always ready for use and giving a steady, constant current, the strength of which may be regulated by the reostat.* So much for the battery itself. I cannot illustrate my personal use of the cautery better than by the following case:

An old gentleman of some sixty-seven years, was sent to our office from an interior town for relief from nasal growths. On examination, both nostrils were found packed with tough, fibroid tumors, as was also the post-pharyngeal space—the polypi pressing forward the soft palate. Three, each as large as my thumb, extended downwards from their attachments into the pharynx, actually touching the base of the tongue. The patient stated that he had not breathed through his nose

* This particular form of battery is manufactured under the supervision of Mr. W. W. Donaldson, by the Viaduct Manufacturing Company, Baltimore. It has this additional advantage: The same battery will run an electric light, electric bells, and an induction coil.

for twenty odd years; we thought the tumors had been growing for thirty. I immediately set to work with a galvano-cautery knife. I cannot say that I pursued any very definite method, beyond plunging the white-hot knife into the centre of the various polypi. They were thus rapidly destroyed, and in a few sittings both nostrils were cleared of all the anterior tumors. To get at the posterior polypi was by no means so easy. The soft palate was drawn well forward by a soft rubber tube, which was passed through each nostril and drawn out the mouth. The tumors, being thus exposed, were easily destroyed with a post-pharyngeal electrode.

After six sittings, the patient was dismissed, and I have heard nothing to lead me to suppose that the cure was not complete. Of course, a large of amount cocaine was used during the operation. The hæmorrhage was much less than might have been supposed, and the patient did not complain of any great amount of pain. In this case the lining membrane itself was but slightly burned. I was, however, especially careful of the Eustachian tubes when operating behind. Finally, I now use the cautery in all cases of mucous or fibrous polypi when the patient will consent.

II. *The Removal of Hypertrophied Membrane over the Turbinated Bones.*—This condition of the membrane covering these bones, both anteriorly and posteriorly, the so-called hypertrophic rhinitis is, as you know of very frequent occurrence, and brings with it an exceedingly annoying train of symptoms. Hypertrophy of the erectile tissue steadily increases with the degree of irritation to which the membrane is subjected, and the disagreeable symptoms increase in proportion. The patient experiences an alternate stoppage and patency of the nostrils from the inhalation of dust or vapors, and indeed from anything which favors the flow of blood to the part, change of temperature, etc. The stenosis in such cases is nearly always anterior. Posterior hypertrophy, however, is frequent, and would seem to be more particularly felt in damp weather. It shows itself, according to Jarvis, in sudden and partial deafness, and, indeed, this author declares that this form of trouble is too often treated for middle-ear catarrh, when, in fact, the deafness is really due to the pressure of an hypertrophied posterior turbinated upon the Eustachian tube. Finally, not only are attacks of acute coryza due to this form of hypertrophic rhinitis, but true hay fever, as well as an irritating cough,

are often dependent upon the enlarged and hyper-sensitive condition of this erectile tissue; and, as we shall see, such attacks may be entirely prevented by its removal. For the cure then of this condition of hypertrophic rhinitis, we must destroy the superfluous tissue, and this may be done in several ways.

Caustics are frequently employed for their destruction, and those most frequently used are chromic, acetic and monochlor-acetic acids. Personally, I am accustomed to use chiefly chromic acid. The method of procedure is briefly as follows: Having applied a four per cent. solution of cocaine to the membrane, the crystal of chromic acid is applied directly to the desired spot by means of a shielded applicator (such as I have here), and the surface then wiped with a solution of sulphate of lead and glycerin. The pain is but slight, and six or eight applications generally suffice to destroy all the tissue desired. After the application, the nasal mucous membrane becomes much swollen, and indeed the objection to this treatment is the sneezing and coryza which so frequently follow its application. This, however, never lasts long. In the course of a day or so there is an exfoliation of membrane, and considerable reduction of the hypertrophy. I have rarely seen any ulcerative condition follow the application of this acid, and, as a rule, it is very satisfactory, and will often be borne by patients who refuse to allow the use of a snare or galvanocautery. In the treatment of children, it is almost indispensable. The treatment by this particular agent was first used I believe by my father, Prof. Donaldson.

Another excellent procedure for the removal of anterior and posterior hypertrophies is that employed by Jarvis, of New York. He prefers to cut off the infiltrated and redundant tissue by the cold snare, spoken of before. The wire noose is passed over the growth, which is gradually cut off by the increased traction. When the hypertrophy is large and situated anteriorly, the removal by this method is simple; when it is situated further back, however, it is much more difficult, and it is then necessary to transfix the tissue with a long needle. The advantages claimed by Jarvis for his meth-

od, are the slight pain and hæmorrhage (provided the snaring is done slowly), the rapidity with which the tissue heals, the permanent opening of the nostril which the cicatrical contraction causes, and, finally, the ease with which the operation is performed. In my own experience, however, the drawbacks to this surgical treatment have been manifold. The length of the operation—one or several hours is required, for unless the traction is very gradual, considerable hæmorrhage may result; the very considerable and long-continued pain which it invariably causes, and, finally, the ease with which the operation *is not* performed. Jarvis himself is the most skillful operator with the snare, I suppose in America; but I am sure most of those who operate upon the nose will agree with me in saying, that to properly snare a posterior hypertrophy is one of the most difficult operation in rhinology.

After all, the most satisfactory method of destroying turbinated hypertrophies is by the galvano-cautery. It is moreover especially applicable in cases of complete stenosis, in which it is desirable to destroy the redundant tissue throughout the entire length of the anterior and under surface of the inferior turbinated bone, and where there is also hypertrophy of the membrane covering the septum. In the former case the cautery knife is introduced, if possible, underneath the hypertrophied tissue, the current turned on, and the mass severed from its connection; this is rapidly accomplished, a second or two sufficing for its destruction. Sloughing follows; and during the process of healing, metallic sounds should be introduced daily until cicatrization has taken place. Of course, more than one burning may be necessary. In destroying the lesser hypertrophies, care must be taken not to destroy too much of the tissue. Shurly thinks it better in such cases to apply the edge of the knife to the membrane, commencing as far back as necessary and drawing the knife forwards; if the broad surface is applied, he thinks there is danger of burning too much tissue with a strong stream, while with a weaker one the surface of the membrane only is burned. This burning, however, is of little effect, since the mucosa *must* be penetrated, and the sub-mucosa,

cut, in order to insure success. There can be no doubt of the convenience and efficiency of this method of treatment; but serious accidents may result from an incautious use of this agent. As we have said, these accidents are not so likely to follow its application to nasal or post-nasal growths; but in the burning of hypertrophied tissue, Cohen has seen extensive sloughing of the nasal tract and inflammation of the nasal duct and conjunctiva, as well as facial erysipelas involving the facial tissues. Daly has seen otitis media result from accidental burning of the rim of the Eustachian tube. However, with a well dilated nostril, proper insulation of the knife, a good battery—care being taken that the platinum is not too thick to become raised to a white heat instantly—and then with a steady hand, and keeping the knife in place for a second or two only, such accidents need not be feared (Wagner), and the cases will proceed to a satisfactory termination.

The Destruction of Adenoid Vegetations of the Vault of the Pharynx.—By adenoid vegetations of the vault of the pharynx, we mean an hypertrophied condition of the group or aggregation of follicles, known as the pharyngeal or Lüsckha tonsil. They are the cause of so much trouble and annoyance that it may be well to give a few words to their pathology and diagnosis. Microscopically, these vegetations consist of cylindrical epithelial cells grouped together, and separated by a small amount of connective tissue, containing many blood vessels. The normal appearance of the vault of the pharynx varies so much that it is difficult to say what may be considered its morbid look. However, when the glandular elements in this region take on a morbid growth, the bulk of the tissue becomes much enlarged, assumes the aspect of rounded or pedunculated masses, and covers a large area. "Whenever this tissue is moderately developed, and closely examined, there will be seen upon its surface numerous depressions, which are either the external orifices of the acinous glands contained in its structure or the marks of depressed follicles. It is usually soft in consistence." (Robinson.) Adenoid vegetations occur mostly in early life, or at adolescence, and their configuration differs

greatly. In some instances they hang down from the vault, and have been likened to a bunch of grapes; in such cases the mass is large, pedunculated, with smooth surface, and of pink color.

Læwenberg thinks those of lymphatic temperament predisposed to these growths. In my own experience they have occurred most often in delicate and scrofulous children. The vegetations will usually be found covered with a greyish viscid mucus, which is difficult to expectorate. Speaking generally, however, not as much post-nasal discharge comes from these growths as from those cases of nasal catarrh with smooth but general hypertrophy of the naso-pharyngeal mucous membrane.

One of the most characteristic symptoms of glandular hypertrophy of the vault of the pharynx is a want of clearness in enunciation, and of vocal resonance generally—a certain “deadness” of the voice. There is impaired hearing and deafness from direct pressure upon the orifices of the Eustachian tube, or from congestion which may extend into them.

So much for this particular form of hypertrophy. Its treatment, or rather its destruction, is so necessary for the cure of the many troublesome symptoms, and the disgusting discharge which it causes, that we may be excused for giving it somewhat in detail.

Among the curative methods of treatment, perhaps the simplest is by repeatedly scraping the vegetations with the nail of the index finger. This procedure, however, is so distasteful to the patient, and of such doubtful efficiency, that I do not think there is any good excuse for resorting to it. Another method, and the one which Wagner most often uses, is by the use of post-nasal forceps, such as we have here. As you see, the blades are sharp and spoon-shaped. They are introduced behind the soft palate, and there is usually little trouble in grasping the growths, and many may be removed at one sitting, especially if the rhinoscopic mirror can be used. In my own hands, this method has been generally effective, particularly where the vegetations are of the large, pedunculated variety.

In those cases where the hypertrophy is rather of the whole

membrane, with occasional enlarged follicles, and where on inspection we find an extensive and thick pad of adenoid tissue, the best treatment is by chromic acid, or by the galvano-cautery. Beverley Robinson objects to the use of chromic acid, nitrate of silver, potassa fusa, Vienna paste, etc., on the ground that those which are sufficiently energetic in their action to destroy tissue to any depth cannot be limited readily in their application or their effect. However this may be, I have found chromic acid an excellent escharotic in these cases. I apply it by means of a shielded probe. The objection to it is the number of applications required before the requisite amount of tissue can be removed.

The removal of adenoid vegetations with the galvano-cautery I have found somewhat dangerous, and very painful, though cocaine was extensively used. The spiral, not the knife, should be used in such cases, and great care should be exercised not to impinge upon the Eustachian tubes. The cautery, however, is often very useful in this class of cases.

One of the most satisfactory methods of removing adenoid growths, when they are pedunculated and of large size, is by means of Bosworth's modification of Jarvis' snare. This instrument, as you see, has a suitable upward curve, to reach the pharyngeal vault. Before introducing the probe, the wire loop is given such a bend, that as the loop is gradually drawn into the canula, it presses more and more firmly against the post-pharyngeal wall. It thus scrapes, in its passage, the enlarged vegetations, and finally severs them from their connections. The excellence of this method (especially is it useful in young patients) needs no words from me. It requires, however, considerable skill in manipulation.

I have thus, gentlemen, passed rapidly, and I fear superficially, over the general surgical treatment of the various hypertrophies and growths found in the various forms of nasal catarrh. The subject is a large and important one, to which you must know it is difficult to do justice in so short a paper. I desire to thank you most truly for your courteous attention.

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Clinical Reports.

Operation for Lacerated Perineum.* By R. F. YOUNG, M. D.,
Edgewater, Va.

June 9th, I was called to see Mrs. D., multipara, aged 48. I found her with a very pallid countenance, and she was very much exhausted from uterine hæmorrhage, which, she stated, had been almost constant for two weeks previous. On making a digital examination, I found a complete laceration of the perineum, with the womb retroverted and very much enlarged. I used tampons to check the hæmorrhage, but, when removed, the flow would be the same. After two days I lifted the fundus as far forward as possible, and applied a Hodge's closed-lever pessary, with the result that, by relieving the uterus of its own pressure and sagging, the hæmorrhage was stopped. The object was to keep the womb in its normal condition, which the pessary failed to do, owing to the absence of perineum.

When I found this state of things, I invited Drs. Wagg and Smith to see the case, and advise as to whether the perineum should be closed. This being decided upon, she was put upon appropriate treatment preparatory to an operation.

It was desirable that the enlarged condition of the womb should be lessened as much as possible; and to this end it was held in position by means of a large cotton ball, saturated with a solution of carbolic acid and Listerine. This ball remained eight days without discomfort, after which it was removed and the vagina was washed out thoroughly. This was repeated several times, with the result of materially lessening the enlarged uterus. I had never left a tampon in the vagina longer than four days, previous to this time, and, naturally, watched its effect with some anxiety.

On the 18th of August the patient was ready for operation. With the assistance of Drs. Wagg and Smith, and medical students Weiss, Smith, and R. A. Young, I operated for the purpose of restoring the perineum. I had directed her to take castor oil the night before, and on the morning of the operation the bowels were thoroughly evacuated by means of an enema.

It is a pertinent fact that rural practitioners are poorly equip-

* Read before Grayson County Medical Society, September 25, 1886.

ped for surgery; and, owing to this fact, more than any other, strong silk whipcord and quill sutures were used. These, however, are as good as to use wire, but not near so fashionable. The quills were made of rubber tubes, with small sticks inserted to make them sufficiently rigid.

When the patient was thoroughly anæsthetized, which was done by means of chloroform, the hips were brought close to the edge of the table. An assistant held firmly each leg with one hand, while with the other the labia and adjacent tissues were stretched firmly and evenly outward, so as to bring thoroughly into view the parts to be denuded. This was done with a small bistoury and artery forceps—the latter being preferred to the tenaculum, for the reason that the mucous membrane could be caught up and held with greater facility.

The parts were denuded by commencing at the edge of the labium on the left, and dissecting a strip across to the right, continuing this up to a previously marked point in the median line of the posterior wall of the vagina.

When this was completed, the next step was to insert the index finger of the left hand into the rectum, and, by making firm pressure upward and outward against counter pressure with a sponge, the hæmorrhage was soon checked and the sutures were put in position. Commencing next to the anus, and introducing a needle about an inch from the freshened surface, four deep sutures were introduced, the needle being guided by the index finger of the left hand, and its point of exit facilitated by pressure of the thumb of the left hand on the parts adjacent. When the deep sutures were all in place, they were drawn up and tied securely over the quills. Next came the superficial sutures, which were placed at intervals sufficient to coapt the edges of the denuded surface nicely.

The *after treatment* consisted in the use of opium, sufficient to lock up the bowels for eight days, and evacuating the bladder with scrupulous care, preventing the urine from coming in contact with the wound. When placed in bed the patient's knees were tied firmly together, and kept so for two weeks.

The usual T bandage was omitted, and the only dressing used was carbolic acid and Listerine solution. In this, a cloth was saturated and kept constantly applied.

On the seventh day I removed all the sutures, and found that a small slough had occurred by having the first suture

drawn too tight, but the upper two-thirds had healed by first intention.

The lower bowel was evacuated *per enemata* of warm water, and the parts washed perfectly three times a day, after which a pledget of cotton, smeared with vaseline, was placed between the buttocks to prevent chafing.

The sloughed healed kindly, and granulations from the bottom filled up the cavity without leaving the parts in a distorted condition.

September 8th.—Mrs. D. is doing well; the parts are perfectly healed. I propose soon to apply some form of pessary to keep her womb in proper position, when, it is hoped, she will be restored to perfect health, and to one member of the family, at least, a joy forever.

A Case of General Lymphadenoma—Hodgkin's Disease. By A. S. PRIDDY, M. D., Keysville, Va.

The first notice we have of this disease, which bears his name, was brought out in a paper by Dr. Hodgkin, of Guy's Hospital, in 1832, with an accurate description of it, in which he cited four cases which had come under his notice. This paper, however, did not attract the general attention of the profession until 1878, when, I believe, to Dr. Wilkes is due the credit of having called especial consideration to Dr. Hodgkin's paper, in an address before the London Pathological Society, and of having exhibited the original specimens preserved in Guy's Hospital Museum. The name of Hodgkin's Disease was then given it.

Dr. Wilkes says, in his paper, that a large number of cases is recorded and reported by Greenfield Hutchinson, Gowers, and others; but our literature is somewhat meagre, even in the latest editions of our text-books—the very best description of the disease being in Pepper's *System of Medicine*, by Dr. Osler.

Dr. Hinsdale, of Philadelphia, reported a very interesting case in *Medical News*, of July 17th, 1886.

The case which I have to report is as follows:

Miss C., aged 64. Family history good; the most of her family being long livers; with no scrofula, or other hereditary tendencies. Had never been a sufferer from malaria long at a time in her life. Had been enjoying good health until last December (1885), when she first noticed a swelling in her right inguinal region, about the size of a hen's egg, which she attributed to a fall from a horse, which she sustained some six months previous, and from which she had never suffered any inconvenience. Soon after noticing this tumor, others made their appearance, until in a short time her whole abdomen was filled with swellings, varying in size from the fist to that of a hazelnut. Next in order were invaded the cervical region and back of the neck, and lastly bends of arms and legs, until about 15th of April last, when Dr. Gregory, of this place, and myself were called in to "cut the tumors out," and give her something "to build her up," in her own vernacular. We found her literally covered with glandular enlargements, varying in size from that of a cocoanut to that of a hazelnut, consisting of a tense, slick-appearing tumor, with a semi-elastic feel wherever there were lymphatics; the largest tumor being on back of neck, causing chin to be immovably fixed upon the sternum. In the bend of right arm there was another as large as a man's doubled fist, which caused her biceps to be as hard as that of a blacksmith, and a stiffness of the elbow joint, with the arm flexed so as to be entirely useless to her. She also complained, for sometime previous, of an intolerable irritability of her bladder, and incontinence of urine, which, upon vaginal examination, was found to be due to growth of a tumor, about the size of a small marble, from roof of vagina, and an encroachment of it upon neck of bladder. She said from about the time she first noticed the enlargement, she suffered from a cold, chilly sensation running down her whole body. Her tongue was coated, pulse quick and feeble, temperature a little sub-normal, countenance pinched and care-worn, with a deadly pallor, skin cold and clammy, appetite very poor, very restless at night, respiration labored and much prolonged, heart's beat quick, and very feeble first sound; bowels were inclined to a diarrhœa. No complaint of any alteration in vision. On abdominal palpation, the liver and spleen were found to be much enlarged and hardened. In a few words, she was a true picture of a profound anæmia.

For treatment, she was first put upon cod-liver oil, iron, quinine, and arsenic, with a liberal nutritious diet, and en-

largements painted with iodine ointment. We saw her again in about three weeks, and found feet and legs had swollen a great deal; had a very troublesome diarrhoea, and bed-sores had commenced forming; all of which continued getting worse for a little over a month, at which time she died from asthenia and general dropsy, as we prognosed. I failed to make a microscopic examination of the blood; yet I am certain that this case was associated with leucocythemia, and that there was a large preponderance of leucocytes, and consequently a very much diminished number of red blood corpuscles. Much to my regret, no post-mortem examination was allowed to be made, as I am certain that all the pathological lesions usually found with this somewhat rare disease were associated with this case.

Taken altogether, this case presents some points worthy of note, both in suddenness of its onset and its quick termination, the patient living only about six months after its appearance, which is about as short, or shorter in duration than any other case I have read of. I think the dyspnoea which I mentioned above was due to the presence of one of the enlargements upon some part of the respiratory tract, as she suffered from attacks of a kind of asthma. At present, when the etiology of the disease is involved in so much obscurity, the prognosis is bad, and treatment futile; but by the investigations made by our pathologists, I hope some of this obscurity may be removed, and that we may combat this now hopeless disease, which is happily very rare, more successfully and intelligently.

Correspondence.

Legibility in Prescription Writing.

Mr. Editor,—The want of the recognition of the old saying, that "The care of being careful is a careful care," is a want which the medical profession have long felt in the matter of prescription writing. Less than a century ago students were taught that prescriptions must be written in Latin and with strict regard to the principles of illegibility. At the same time a druggist was not held to be educated to his

profession unless he could read all manner of hieroglyphics. Lacking this accomplishment, he obtained credit for illiteracy, but was not held to be of quite as low a degree as the medical man who wrote a fine, clear hand. But times have changed. After a hard fight, there has come the triumph of legibility, and the professor of materia medica and therapeutics who does not teach the rule of the new principle is regarded as remiss in his duty. No physician graduates to-day but who is expected to conform to this requirement; but the old way of looking at things is still strong, and the period is still one of *renaissance*. There is room for the preaching of legibility, and there is a place for the preacher. The rule has become, "No Latin; plain English, and a plain chirography."

"No Latin!" Why not? Condemned in clergymen and lawyers, is there any sense in its use by physicians in this one particular way? In the first place, two-fifths of the drug clerks cannot read it, and the margin for blunders is fearfully large. In the second place, there are not wanting physicians who know little if any Latin, but who air their smattering on their prescription blanks, and provoke to ready errors. In the third place, there are no reasons for using Latin which are at all tenable.

"Plain English." This refers more especially to the signs and abbreviations. The patient who read *ter die* at the foot of a prescription and was frightened into actual death, was not unrelated to the convalescent who was rendered insane by a sight of the signs for scruples and drachms. Is it not just as easy to write "oz.," "dr.," and other English abbreviations? And it is being done, the druggists say. Good! Plain English in prescriptions is the demand. No Latin, no Sanscrit, no German—English for the English-speaking.

"A plain chirography." The popular demand is that the physicians write plainly, so that even the pharmacal students may read. Crow's tracks are out of fashion, and there is no excuse for poor writing. Do not ask the matriculant if he has attended the Latin school, but rather has he been at a writing school? But you will say that there are some who cannot write plainly. Then get a type-writer, and use that.

Leading druggists are enthusiastic over the idea, recently adopted by medical men. The type-writer writes plain, saves time and strength, and produces the perfection of prescriptions. But it costs too much, you say—an average practitioner cannot afford to pay \$80 to \$100 for such a machine. No need of paying any such price.

Buy a Sun type-writer, which any physician can afford, as it costs only twelve dollars, and though small, is a perfect working machine. Simple, good, durable, easy and rapid, it is the latest design in the way of a type-writer, and is destined to outsell the old high-priced machines. Of course it does not use the characters of weights and measures, but plain English demands plain "oz.," "gr.," "pt.," etc. By using carbonized prescription blanks, or by the hektograph process, the prescription is readily duplicated without the trouble of copying. The machine, moreover, weighs only four-and-one-half pounds, and can be used not only in the office, but can be carried at will if necessary. It will also do all of your general correspondence.

Write prescriptions in English with a Sun type-writer, and no damaging errors will creep in through misreading of a badly written prescription.

WILLARD H. MORSE, M. D.

Westfield, N. J., Sept. 11th, 1886.

Proceedings of Societies, Boards, etc.

MEDICAL SOCIETY OF VIRGINIA.

The Seventeenth Annual Session convened at 8 P. M., October 26th, in the historic city of Fredericksburg, Va. The attendance during the session was large, and representative of the profession of the State. In addition, Drs. Theophilus Parvin and William S. Forbes, of Philadelphia, Archibald Atkinson and Frank Donaldson, Jr., of Baltimore, Md., William T. Cheatham, of Henderson, N. C., J. Taber Johnson and Patrick J. Murphy, of Washington, D. C., and Thomas R. Evans, of Mt. Carbon, West Va., were in attendance as guests.

According to custom, the meeting of the first night was

open to the public as well as to the profession. The spacious Opera House was consequently well filled with ladies and citizens at the hour of meeting, notwithstanding the very rainy weather.

After the President (Dr. Rawley W. Martin, of Chatham, Va.) called the session to order, and after prayer by Rev. Dr. Smith, of the Presbyterian Church, and addresses of welcome by Mr. Mason (on the part of the citizens) and Dr. H. M. D. Martin (on the part of the local profession), Dr. Hugh T. Nelson, of Charlottesville, Va., was introduced, and delivered the "Annual Address to the Public and Profession," his subject being *The Fallacies of Modern Medicine*. This address was so favorably received that it was voted to be published in the forthcoming volume of *Transactions*. He began by showing that whatever was of interest to any profession must of necessity have the good of the public at large as its ultimate object, illustrating the point by incidents drawn from the several callings followed by *the people* in the aggregate, and showing that the devotees in religion, science, politics, philosophy and art had all conferred benefit upon their generations. He also maintained that honest effort in any legitimate direction was always productive of good to the community when attended by failure as well as when successful.

Then, stating "*The Fallacies of Modern Medicine*" to be his subject, he showed that in no other profession was there more field for the operation of the reasoning faculties than in that of medicine; and that mental culture was an essential for success in this branch of science. That the lack of educational attainment on the part of candidates for the practice of medicine was one cause of the disrepute into which the profession is falling, and that this lack was entirely due to the fact that the medical colleges of the country, for the most part, gave their diplomas simply as a return for a definite limited period of *lecture-hearing* within their halls. The public had no means of determining who were and who were not suitable custodians of the life and health of a community, and that the determination of the question was a matter too vital to be postponed till ignorance and empiricism had erected "*monuments which the eating rains could not efface.*" That a diploma from a medical college should be ample guarantee of a man's ability to cope with the various questions arising, both directly and collaterally, from the study of diseases as observed in practice; and that in order that this ability vest in any individual, he must possess a higher degree of mind-culture than that required by any of our American colleges

as prerequisite to entrance to their lecture-rooms. His report of the work of the Examining Board of Virginia was entirely confirmatory of the charges brought against the medical schools of the country, and evidenced lack of thoroughness in their methods of teaching, as well as carelessness in their manner of granting their certificates of graduation.

The members of the profession, too, were too grasping of gain, and their own wranglings were productive of disrespect for the doctorate on the part of the public. Petty jealousies, and their consequent estrangement, should be laid aside, and the people shown that the profession were united on the broad philanthropic basis, having as its object the cure of disease and prolongation of life.

Then he discussed the question of the disregard of the medical profession of to-day for the teachers and teachings of a half century ago, claiming that this was one of the prime causes of the low rate of advance in the actual treatment and cure of disease, when compared with the advance in all other departments of the science of medicine. Physiology, chemistry, microscopy, bacteriology, surgery, and hygiene, all had made wonderful strides, to which the increase in the length of a generation of men was entirely due; but that in the actual presence of disease, the physician of to-day had no more power, with all his advanced knowledge and increased facilities, than the so-called "old foggy" of fifty years back. The modern physician, busy with his own theories, totally ignorant of the methods and practices of that grand old generation of medical men, now no more, had hardly a chance of reaping any benefit from their experience, and consequently treated disease certainly no better, if as well, as they.

Lastly, he dwelt briefly upon the admission of women to the ranks of the medical profession. Admitting woman man's equal and sometimes his superior in mental power; granting that there was no reason why she should not become an eminently successful practitioner, he strongly deprecated that women should ever enter the profession. That she was endowed by God with those qualities which adorned the home and fireside, and which rendered her so much the object of man's respect and esteem; and that in order to enter any of the professions, she must perforce divest herself of these very attributes which essentially constituted her woman as beloved and revered by the sterner sex. Laying aside her feminine nature, and appearing alongside of

men in dissecting-rooms, hospitals, and amphitheatres of medical colleges, she proclaimed herself a fallacy, no matter what degree of success and eminence she attained in the profession.

The Committee to Nominate Applicants for Fellowship during this session presented sixty-three applications, each of which was approved. The report was received and adopted, and the parties thereby became Fellows of the Society.

The *Report of the Necrological Committee*, prepared by the Chairman, Honorary Fellow, Dr. S. C. Gleaves, of Wytheville, Va., contained memoirs of the following named deceased Fellows: Honorary Fellow and Ex-President, Dr. A. M. Fauntleroy, of Staunton, Drs. Meade C. Kemper, of Norfolk, Thomas D. Stokes, of Danville, David Steel, of Petersburg, J. T. Spencer, of Farmville, Richard H. Cox, of West Point, and Jenifer Garnett, of Richmond.

SECOND DAY—*Morning*—October 27th.

The Society was called to order at 9.30 A. M. by the First Vice-President, Dr. John S. Apperson, of Town House, Va.

After some routine business, Honorary Fellow, Dr. John Herbert Claiborne, of Petersburg, Va., was requested to present his paper on

SCHOOL HYGIENE.

He said he had seen an article in a recent popular monthly on the "*Bodies of our Children*." It had set him to thinking and inquiring how much had been done for the "souls" and the "minds" of our children, and how little for their "bodies." The parent and the preacher, from pew and from pulpit, had given line upon line, precept upon precept—the Sunday School, with pictures, charts and maps, and pretty books, had made the way so pleasant that it could no longer be called strait nor its gates narrow. Indeed, so many asperities had been rasped down, so many rough places had been made plain; so many mountains brought down, so many valleys up-raised, that the old Pilgrim of Bunyan would no longer recognize the road he had trodden in so much pain and peril; and the public and the parents had given so much time and money to the "mind" that schools and colleges and universities covered every bill—and saying nothing of

private schools, about one-third of the taxes assessed in this Commonwealth were assessed for purposes of public education. The minds were thoroughly looked after—were strained—even forced—as potatoes in a hot-bed, and boys and girls were expected to be “wise beyond what is written.”

But the *bodies*—effeminate, emasculate, enervate—were left to struggle in pain and ignorance with the great labors and struggles of life—finally called on to do a man’s work or a woman’s work—without power, without force, and without help. What was the result? Failure of the men—feeble and impoverished strength to meet the great requirements of an age of energy and exaction; and for the women the shawl, the sofa, neuralgia, headache, backache, hysteria—the last, that great demon of domestic life—scarcely less fruitful of unhappiness in the family than the husband’s dram. For this he held the parent no less than the teacher responsible—the desire of the one and the requirements of the other that the minds of the young of both sexes should be filled in a few years of school life with all knowledge and all accomplishments.

The remedy lay in a little common sense consideration of the subject—that same common sense which sensible people apply to all enterprises and objects of life. The parent must exact less, and the teacher be content with less. Again, mental and physical training must be conducted at the same time and in the same school. A regular time should be appropriated to play and to study, and children should be taught to play as they are taught to study. The play-room or gymnasium should be built when the school-house is built, and the children should no more be turned loose to play and train themselves in the one, than they should be turned loose to study and educate themselves in the other. Not only failure but confusion—pandemonium—would prevail in both. And a teacher that can be made capable of teaching the mind of the young, can be made capable of teaching the body of the young.

One teacher may only be a teacher of the rudiments of the one, and one teacher may only be a teacher of the rudiments of the other; but skilled labor, skilled service, may be acquired for both by proper compensation and by proper training of teachers.

This address was deemed of such great practical importance that a resolution was unanimously adopted, urging upon the Superintendent of Public Instruction of Virginia

the suggestion that he should have thousands of copies of this paper struck off in pamphlet form, to be distributed among teachers and patrons of schools throughout the State.

The Report on Advances in Anatomy and Physiology, by Dr. J. A. Anderson, of Elba, Va., was next presented. Taking up first the department of Physiology, he spoke of some recent observations relating to the process of *digestion*, noting Reichmann's conclusion regarding the digestion of milk. Then he summarized *Lowenthal's theory of menstruation*. Simanowsky's experiments on dogs, clearing up in a great measure the *physiology of hepatic colic* were then dwelt upon. The views of A. Wiess, as to *what becomes of the bile in the intestines?* were mentioned. The latest observations relating to the *connection between glycosuria and biliary obstructions* were given. Schrieber's discovery as to how *albuminuria can be experimentally produced in man* was detailed. The *functions ascribed to the corpus striatum* by Baginsky and Lehman were recorded. Freund's demonstration that the *coagulation of blood is hindered by the use of oil* was alluded to. And after speaking of the recent views as to the *origin of the fibrin ferment*, Dr. Anderson passed on to *Advances in Anatomy*, mentioning, first, the *use of the fossa at the lower end of the fibula*. Then he describes Gruber's *extensor tendons of the fingers*, and then Walsham's *cricohyoid muscle*.

The Secretary presented by title a paper by Honorary Fellow, Dr. Joseph M. Toner, of Washington, D. C., giving "*A Sketch of the Life of Dr. Gustavus Richard Brown, of Port Tobacco, Maryland, one of the Consulting Physicians during the Last Illness of General George Washington, at Mount Vernon, Va., together with a Copy of his Will.*" This is the last of the sketches of the three physicians attending General Washington, which Dr. Toner has contributed to the "Transactions" of the Society in as many years, and are of great historic value to Virginia, and especially to the profession of Virginia. These contributions are specially prized, as no one else could or would have been painstaking and liberal enough to collect and contribute the data Dr. Toner herein furnishes.

The President, Dr. Rawley W. Martin, of Chatham, Va., next proceeded to deliver the *Address of the President*. He announced as his subject,

PRACTICAL HINTS IN HYGIENE.

He remarked, that until a recent period the profession had been too much engrossed in finding cures for many diseases

which are now better managed by taking the ounce of prevention. The profession is now everywhere aroused to the importance of preventive medicine. He urged the physicians to teach the people hygiene. Hygiene should be a part of the school curriculum.

The chief cause of malarial diseases is the want of proper drainage of our lands. The destruction of our forests is always followed by increased sickness. Therefore the waste of timber should be prohibited by law. He urged the members to get their legislators to vote for an appropriation to sustain the State Board of Health.

Artificial feeding of infants is believed to be largely responsible for their increased mortality. The failure of American mothers to nurse their offspring is an anomaly to be found in no other country in the world.

Insanity is largely due to the violation of nature's laws and to large consumption of alcoholic beverages. Their influence in shortening life may be gleaned from the following: A temperate man at the age of 20 may expect to live 44 years—if intemperate, 15.5 years; at 40 years of age, 28 years—if intemperate, 11.5 years, etc.

The subject for general discussion,

PUERPERAL SEPTICÆMIA,

was announced to be next in order. Whereupon, Dr. L. Ashton, of Falmouth, Va., was introduced as the Leader, and proceeded at once to read an elaborate and exhaustive paper on the subject. He defined the disease as an infectious disease due to inoculation of the wounds, which results from the separation of the decidua, and passage of the child through the parturient canal, as well as from infectious diseases, such as erysipelas, and all zymotic fevers. He described the disease as being a metritis, a vaginitis, a peritonitis, a cellulitis, and a phlebitis; and discussed fully the characteristic symptoms of each. He traced the history of puerperal septicæmia from the days of Hippocrates, giving the different views held by the leaders in medicine, down to the present time, as to the nature of the disease, and showed that Semmelweis, of Vienna, in 1847, first taught that the disease was produced by the poison engendered by cadaveric decay, and that at this day all modern investigators acknowledge it to be due to a septic material, which enters the circulation through solution of continuity in the generative tract, or to some of the infectious diseases. He dwelt earnestly upon the importance of clearly diagnos-

ing between puerperal septicæmia and pyæmia. Prevention was next considered, and he gave the views of Thomas, Garrigues, and others, and discussed fully the importance of absolute cleanliness on the part of the obstetrician and the obstetric equipments; but entered an earnest protest against the folly and uselessness, in ordinary labors, of using the germicides, etc., as advised by Fancourt, Barnes, Doléris, and many others, and contended that pure, clean water, that has been boiled down, is all that is requisite in most cases. In the treatment, he says the first thing to do, on rise of temperature indicating an attack of puerperal septicæmia, is to cleanse the vagina with a 2 to 3 per cent. solution of carbolic acid, or Listerine 1 to 4, or corrosive sublimate (1.3000), every four to six hours. Much stress is laid upon the importance of intra-uterine injections in the successful treatment of the disease, and urges great caution in their use, and shows the necessity of an intelligent physician's doing it himself, using always a Chamberlain glass tube, or the tube invented by Dr. Lyman, of New York, fixed to a Davidson syringe. Opium to control pain and nervous shock is highly spoken of, given in sufficiently large doses. To reduce temperature, salicylic acid, or antipyrin preceding quinine, with the use of cold applied by means of the Kibber's cot, Townsend's rubber tube coil, or sponging.

Alcohol holds a high place in the treatment, as does digitalis. The diet, he urges in all cases, should receive particular attention as a means of restoring tissue-waste.

The subject being open for general discussion, the President requested Dr. Theophilus Parvin, of Philadelphia, Pa., attending this session by invitation, to present his views on Puerperal Septicæmia.

Dr. Parvin began by stating that scarcely had he arrived in this city before he received two evidences of Virginia hospitality. First, as he stepped off the train, he was accosted by a citizen who so courteously insisted upon his breakfasting with him that he had to accept the invitation. Secondly, he had arrived in this hall only a few minutes before he was told that the Society wanted him to make some remarks on this subject.

In the acceptance of this latter invitation, he was reminded of the anecdote told upon one of Virginia's brightest orators, the illustrious John Randolph, of Roanoke. Randolph used to say when he had finished a speech, he always regretted what he had not said. As for himself, Dr. Parvin remarked that he feared that when he was done, he would have to regret what he had said.

In the outset, Dr. Parvin stated that if he were called upon to give a definition of the term puerperal septicæmia, he would define it somewhat after this manner:—*Puerperal septicæmia is a febrile affection of women in childbed, which is contagious and heterogenetic.*

He believes the disease is dependent on germs, for the following reasons:

1. The smallest particle of infected matter conveyed from one puerperal woman to the vagino-uterine tract of another woman in childbed gives the disease.

2. We may assume this statement to be correct from what we know to be the effect of germicides in preventing the disease.

3. Analogy also helps us to this conclusion, as we know that many diseases are dependent upon the introduction of living germs into the system.

Some gentlemen say that germs are antogenetic. Whoever believes this must believe in spontaneous generation. Dr. Parvin believes in no such doctrine. We don't say that scarlet fever begins itself. The poison is conveyed from outside—from another case of scarlet fever. So we say of puerperal septicæmia. The disease of which we are speaking, and which kills the woman, is not born in her. It is brought to and deposited in her from a preceding case of puerperal septicæmia. He does not believe that scarlet fever, diphtheria or erysipelas can produce puerperal septicæmia. In a word, the specific poisons of these diseases are not identical with that of puerperal septicæmia, but they may be associated in one case, and thus have the appearance of conveying these different diseases. But a dog cannot breed a cat, although they may associate with each other. He referred to a fatal case of puerperal septicæmia in a mother who had nursed her child through an attack of scarlet fever. But when she was confined, immediately afterwards, she had a nurse who had been with a case of puerperal septicæmia.

The question has often been asked, can a puerperal woman have puerperal septicæmia without having a wounded womb? He does not believe it. He has never seen a case unless there was a wounded uterine surface.

Likewise, the question has been asked, don't retained membranes, clots, etc., become causes of puerperal septicæmia? He would answer, No, provided they are kept aseptic. These decaying secundines simply furnish the suitable soil for the nourishment of the microbe. The poison itself always comes from without.

Dr. Ashton, in his elaborate and well prepared paper, spoke of diphtheria of the vagina as a form of puerperal fever. Dr. Parvin would remark that only a few authors of the present day admit that there is any such form. He does not think such a form really exists.

Some authors have supposed that there was no puerperal septicæmia without a very high temperature. But he has seen cases where the temperature never rose over 101° or 102°F., and the pulse not more frequent than 100 per minute.

Dr. Parvin divides puerperal septicæmia clinically into two forms:—(1) *Lymphangitis*, and (2) *phlebitis*.

Lymphangitis occurs early after the onset of septicæmia—by the second day—and the inflammation extends to other pelvic and abdominal tissues—causing even puerperal peritonitis. In this form of septicæmia in the childbed woman, we *may* find that the patient had an ushering-in chill, but such an event is not necessary to its clinical history.

In the phlebitic form, we *always* find that the woman has repeated chills. This milk-leg form is also the safest to the patient, as it indicates a localization and a limitation of the disease. The adhesive form of puerperal phlebitis is not of spontaneous origin.

Dr. Fordyce Barker and others have written much about the prevalence of malarial puerperal fever. In the fifty or more cases of fever in the puerperal woman seen by Dr. Parvin, he has seen only two cases of puerperal malarial fever. In this intermittent form of puerperal fever, the temperature rises from the normal, or nearly normal, standard suddenly and very high, and as suddenly falls to the nearly natural elevation.

Now as to *treatment*. Dr. Parvin has tried many plans, but the result of his experiences has brought him to depend chiefly upon opium and whiskey. Nourishing food should be given throughout the disease. Antipyrin, quinine, etc., undoubtedly may do good for awhile in lowering the temperature, but they soon break down the tone of the stomach, and impair the digestive function. It is true, he uses these agents sometimes to meet a specific and a purely temporary indication; but he certainly would not depend upon either of them for a continuous or prolonged treatment.

In recommending the free use of alcohol in suitable cases, he would not be understood as saying that it is needed in the majority of instances. But when the temperature rises to 103° or 104°, its temporary administration acts well. It

induces sleep, allays nervous agitation, and lessens the fever heat very ostensibly.

In summarizing his remarks, after the narration of some sad experience many years ago, coming out of the views which had been taught him by the great Professors of the Philadelphia schools when he was a medical student in that city—that puerperal fever was antogenetic—he said: “Gentlemen, if there is one thing impressed upon my mind more than another, it is the conviction, as if written with fingers of fire upon my memory, that *puerperal septicæmia is contagious!*”

Dr. John N. Upshur, of Richmond, Va., in a paper read by Dr. Edwards, reported a case of puerperal septicæmia, with remarks. The prominent symptoms of interest were threatened eclampsia immediately subsequent to delivery. The patient’s skin being hot and dry, she was promptly delivered by the administration of pilocarpin and bromide potassium. The patient progressed satisfactorily until the fourteenth day, when well-marked symptoms of septicæmia set in. The lachial flow had continued *too red for too long*; and great care having been taken to guard against contagion from without, the trouble was traced to a suppurating and sloughing endometrium, shreds of which were removed, and the cavity of the uterus being treated with Battey’s solution, No. 2, the discharge was stopped, and a fall in temperature resulted. *These facts point to its antogenetic origin.* Diarrhœa came on, forming a critical discharge, so offensive that it was difficult to purify the atmosphere of the room with disinfectants. A sister of this patient, three months pregnant, exposed to this atmosphere, contracted septicæmia, and died on the twenty-first day, an example of the histogenetic origin of the disease.

The reporter believed that early treatment of the diseased cavity, as indicated by the character of the lachia, would have prevented the attack.

When the first case was in a condition of profound collapse, and death seemed imminent, nitrate of amyl was exhibited with the most marked beneficial result, reaction coming on promptly. The amyl was kept up for forty-eight hours, being given whenever the pulse showed evidence of failure. Twenty drops were given at the first sitting.

Dr. Charles R. Cullen, of Richmond, Va., followed in the discussion by remarking that as soon as delivery is completed, the womb is left in a condition which makes it subject to infection by several diseases—as erysipelas, scarlet

fever, sloughing sores, carbuncles, cancer, etc. The principal writers admit the clinical fact, but disagree as to the agents producing the infection—whether ptomaines, or decomposing matter, or bacilli, or bacteriae, or microbes. Dr. Barnes, of Edinburgh, admitted that puerperal septicæmia might be propagated even by the breath of the physician or nurse, and says that the disease is more liable to occur in primiparal cases. Dr. Guerin, of Paris, confirms these statements. Dr. Cullen then referred to the histories of several reported epidemics, showing both the great contagiousness—both from other cases of puerperal fever and from other diseases—and fatality of the disease, and quoted from foreign and domestic records to prove his point. The great English surgeon, Dr. Hunter, said that his first case of puerperal fever commenced from his handling an ordinary sloughing felon on a patient's finger, and soon afterwards attending a puerperal woman. From this case, a large number of fatal cases developed. He discontinued obstetrical practice, and got his partner, who had not been in any of the infected cases, to attend six other cases of labor, and no puerperal disease resulted. He then resumed his obstetrical practice, when the disease reappeared in his cases, and he was compelled to discontinue obstetric attendance. Dr. Cullen gave other instances, leading to the deduction that surgeons should not attend labor cases—not that all surgeons would be conveyers of puerperal septicæmia, but the dangers are too great in that direction. As to treatment, he advocated isolation of patients, and disinfection of all persons and things to come in contact with her genitalia. Vaginal washes of weak solution of corrosive sublimate, etc., should be used.

Dr. B. B. Temple, of Danville, Va., said that no one in his city who comes in contact with a case of scarlet fever, diphtheria, erysipelas, and the like, was allowed, by professional opinion there, to attend a case of labor. He thinks, as a result of this prohibition, that puerperal septicæmia is very rare, if it occurs at all, in his city.

Dr. Wm. S. Forbes, of Philadelphia, present by invitation, in response to a request for a statement of his views, apologized for not speaking on the subject, because of feeling unwell. He would remark, however, that one thing had impressed him—and that was the special adaptability of woman to the disease. Septicæmia follows in those surgical cases especially where depletion has occurred. For instance, he has been struck with the frequency of its occurrence amongst

"strikers" who have received wounds or injuries. Without work, they soon become unable to provide means for their healthful sustenance and nourishment, and their physical organisms become depraved—thus laying themselves the more liable to such a disease.

Dr. Patrick J. Murphy, of Washington, D. C., in response to invitation to express his opinions regarding the subject, said he would limit his remarks to a few clinical facts which had been impressed upon him by fifteen year's experience in the Columbia Lying-in Hospital, where he had met with all forms of the disease. He was rather inclined to accept the views of Dr. Parvin in regard to the matters of auto-genesis and hetero-genesis. Before antiseptics were introduced puerperal fever was much more frequent in practice than it is now. He objects to the term "puerperal fever" as applicable to the disease under consideration—preferring that of *puerperal septicæmia*.

In regard to the treatment the two important things were (1) prophylaxis and (2) curative agencies.

By the *prophylactic measures* adopted, he has seen the death-rate reduced from 9 per cent. to 2 per cent. During the second stage of labor, when the os uteri is sufficiently dilated, he uses a hot 6 per cent. carbolyzed douche into the vagina. This measure takes the place of ergot in producing uterine contractions. When the child is born, if the placenta is not immediately expelled, he uses Credé's method, by using gentle friction backwards on the abdomen, and this soon brings on labor pains which expel the after-birth. He next cleanses the parts with simple sponge-baths, and then applies borated cotton to the vulva.

As to the curative treatment, he agrees with Dr. Parvin as to the value of opium and whiskey, and as to the impropriety of depending on such agents as antipyrin, quinia, etc. In fact, he objects to the use of antipyrin in cases of puerperal septicæmia, while he thinks the administration of quinia in anything like heroic doses is to be condemned. He has found spirits of turpentine better than whiskey, both for internal use and externally for stupes. If there be much pain, he resorts to suppositories of extract of Indian hemp. He has seen Warburg's tincture of bark, Norwood's tincture of veratrum viride, etc., tried as antipyretics and fail of result. If the typhoid form of the disease sets in, he treats the case as he would one of typhoid fever. Instead of the cold-water coil, he uses a flannel bandage over the abdomen, over which

he pours alcohol, which rapidly evaporates. The cold-water coil is too apt to produce shock.

The subject was continued during the *Afternoon's Session*, which was called to order at 3 P. M.

Dr. John S. Apperson, of Town House, Va., read a paper on Puerperal Septicæmia. The question which he thinks of paramount importance to decide is whether we shall accept the dicta that puerperal fever is identical with surgical septicæmia, and produced by the absorption of septic matter, "either originating within the generative organs of the patient herself, or coming from without," and regard every puerperal woman, by virtue of her physiological state as supplying suitable culture beds for the propagation and growth of pathogenous fungi. If so, then we might formulate the practical inquiry:—To what extent are we justified in the local use of disinfectants, antiseptics, and potent germicides prior to, at the time of, and subsequent to labor?

Examination of the record of the 656 cases of labor in Dr. Apperson's practice, where no systematic use of any antiseptic has been applied, only ten cases of any metria in any form have occurred, and only one death. He could hardly expect a better result. He has seen many other labor cases, but is rarely called to a case of puerperal fever. Hence the conclusion that pathogenous fungi are not so prevalent as might be inferred from the writings of authors on the subject. Cleanliness he specially insists on in the lying-room.

Dr. Bedford Brown, of Alexandria, Va., read a "report of six cases of puerperal septicæmia, illustrating the results of treatment under the old and the new methods. He believes veratrum viride peculiarly adapted to the treatment of the morbid changes in the circulatory system and the pyrexia. It acts as a nervous sedative and prevents heart labor and exhaustion. For the tympanites, two pints of infusion of flax-seed containing a drachm of oil of turpentine, five to ten drops of carbolic acid and one ounce of Listerine, are thrown up the rectum into the colon twice daily. As to prevention, in no case where antiseptics have been properly used in labor has he met with puerperal septicæmia. His invariable custom is to cleanse out the genital canal by carbolic soap, warm water, and borax. He believes ergot also is an important prophylactic, especially when the uterus is large, flabby, and relaxed. Keep the uterus under its influence until all probability of infection has ceased.

Dr. Thomas J. Moore, of Richmond, Va., first discussed the origin of puerperal fever. He regards the cause as iden-

tical with that of puerperal septicæmia, and they were, therefore, one and the same disease.

The germ theory was fascinating to the investigating mind beyond conception. The French, German, English, and American schools had all met upon common ground.

He then replied to the argument offered by Professor Parvin, in which the latter had stated that it was impossible for scarlet fever, diphtheria, erysipelas, etc., to produce puerperal fever, as the peculiar microbe (or bacillus) would not give rise to a disease different from the special disease it was peculiar to. Dr. Moore stated that he could not agree with the eminent Professor. In the first place, it was yet undetermined as to whether the three diseases above mentioned had a special microbe; secondly, all diseases producing puerperal fever from without had associated with their causative material the micrococcus of putrefactive decomposition; in other words, it was their secretions undergoing decomposition that gave rise to this common resultant puerperal fever.

Such was the case likewise with pyæmia and septicæmia. If the micrococci theory was not the proper one, then all of the diseases through the process of retrograde metamorphosis gave rise to some special animal poison that caused this disease, this process being fermentative in its nature.

The Doctor entered at length into the discussion of auto- and heterogenesis, accepting both as causes. The poison, he believed, entered, as a rule, through some abraded or torn surface through the lymphatics and the veins. Sometimes it penetrated healthy mucous membranes, as demonstrated when females suffered an attack of this fever prior to parturition.

In respect to treatment, he believed much that was done during the act of parturition meddlesome and harmful. He did not believe the female treatment of the present day was so susceptible to pernicious impressions as many of the more enthusiastic would have us believe; he did not believe that any woman's life was imperilled where all the minutiae of details as laid down were not complied with. He gave his own experience in one of the largest lying-in hospitals in the United States, seventeen years ago, prior to the origin of this new school. Mere cleanliness of wards, beds, and water-closets was observed, and for months they were without fever; in fact, could have remained indefinitely so.

He had not the same dread of these microbes as many of the gentlemen of the present day. He believed in precautions, but not to the same extent as those who were on the *qui vive* of apprehension.

Dr. Parvin entered the hall as Dr. Moore ceased speaking, and Dr. Hunter McGuire arose and stated that several Fellows speaking during Dr. P's absence were unable to reconcile the statement made by the learned professor, that while he believed that scarlet fever, diphtheria and erysipelas were the results of separate and distinct poisons, each one of which was capable, by contagion, of reproducing its own disease and no other, any one of them might, under certain circumstances, generate puerperal septicæmia. How could scarlet fever, for instance, which was capable of producing scarlet fever only, under certain favorable circumstances, produce septicæmia in the parturient woman?

Dr. Parvin replied, that he could understand the seeming inconsistency as it occurs to Dr. Moore. In formulating his opinions, as to contagiousness being the sole cause of the disease, from another case of puerperal septicæmia, he would not have it understood that he states a fact, but a belief. The specific poison of the septicæmia is often *associated* with that of scarlet fever, diphtheria, erysipelas, etc., and hence, in the production of puerperal septicæmia by contagion from such diseases, there is the appearance that the poison of the one disease is the same as that of the other. It is a fact of interest in this connection that apparently the same micrococcus occurs in erysipelas as in puerperal septicæmia. It cannot be differentiated by the microscope, or other known means, but it can be by the effect produced.

He wished to add a few remarks to those he made this morning in regard to treatment. *Local treatment* is the most important thing. In the way of prophylaxis, first, the utmost care should be exercised from the very threatening of labor to its full completion, that no infected person or thing be brought in the presence of the patient—much less come in contact with her genitalia. Do not make unnecessarily frequent or prolonged vaginal examinations. He would much prefer that the accoucheur should keep his hands in his pockets than that he should keep his finger anything like continuously on the os tinæ or anywhere else in the vulvo-vaginal uterine tract. Let everything and anything that is to come in contact with the woman be perfectly clean and free from any infectious germ. In the second place, under the head of prophylaxis, he thinks well of *vaginal douches* as soon as labor is over; and according to the apparent need, he uses vaginal injections of solutions of corrosive sublimate of the strength of 1 to 1000, or 2000 or 3000 as required. If fever then develops, he substitutes 3 per cent solutions of

carbolic acid. This solution he applies to the whole vaginal tract through Bozeman's tube, which tube he prefers to any other he is acquainted with. If offensive matter oozes or is discharged from the womb, dilate the os uteri, and, with the curette, remove all remnants of after-birth, clots or other offending matter. Sometimes he has been astonished at the large amount of discharge thus removed.

Dr. B. B. Temple, of Danville, Va., asked, Is it safe for a physician attending a case of scarlet fever or erysipelas, etc., to go directly from such a patient to a woman in labor?

Dr. Parvin replied that a physician can communicate septicæmia to a puerperal woman unless thorough aseptic precautions be taken; for the germs of the one disease may be associated with the germs of the other. Hence, let all attendants upon a puerperal woman be required to be thoroughly aseptic.

Many years ago in his practice a man was wounded in abdomen, and died. The physician who made the post-mortem, and who was a warm personal friend of Dr. Parvin, wounded his finger and died of "dissecting wound poison," and the man likewise died. Dr. Parvin attended him in his fatal illness. At the same time, Dr. Parvin had several cases of labor, and all the women in labor that he then attended died of puerperal septicæmia.

Dr. J. S. Welford, of Richmond, Va., asked Dr. Parvin if it would not be scientifically more correct for him to say that the puerperal condition is necessary in order to produce the disease?

Dr. Parvin replied that perhaps that would be the best form of statement, although he was stating only his belief.

Dr. Hunter McGuire protested against the cross-fire of questions to which Prof. Parvin was being subjected. The subject under discussion was a debatable one; was so far unsettled, and it was scarcely fair to expect answers to the direct and categorical questions to which his friend was being subjected. For himself, he thought there were many points which could only be determined by future observation; that it would require the combined experience of many observers to determine these mooted questions, and the personal observation of no one man would be sufficient.

He believed that a woman after child-birth was a good deal like a woman after a surgical operation, they were both liable to similar dangers. A very common danger in both is septic poison. This septic poison is the result of fermentative changes going on in dead matter only. This dead

matter may be a piece of placenta, or extravasated blood. It is generally the latter. Fermentation taking place, we will suppose in a mass of extravasated blood, produces inflammation and suppuration, and when a portion of this is absorbed it produces constitutional symptoms, which we call septic poison—septicæmia. Dr. McGuire does not believe that it is necessary that this clot should have access to the air, in order to undergo these putrefactive changes and produce blood poisoning. He had opened, as every other surgeon had, abscesses which had followed contusions, when extravasated blood had undergone fermentative change, and when air had had no possible access, and had let out, by incision, fetid pus, blood, and broken-down tissue. Many a woman has puerperal septicæmia which may be explained in this way. The contusion during child-birth is often severe, we find blood extravasated in large quantities in the parts about the uterus and vagina, sometimes a great thrombus in the vulva. It may be without vessels of mucous or cutaneous membranes, and under these circumstances, if her general system is depraved, fermentative changes may take place and end in septicæmia. He can readily see, too, how the introduction of the poison of scarlet fever, erysipelas, etc., would render the unhealthy inflammation and suppuration all the more likely to occur, not that these diseases set up a distinct and separative poison, but provoked into greater intensity an inflammation already impending.

He thought it was important to distinguish between this septic poison, which he described, and the process of infection. He did not think, from what he had heard to-day, that this distinction was always made. The latter process involves the living tissues, not dead matter, and micro-organisms, parasitic in character, are developed. The names of Pasteur and Lister would go down into history to the latest generation. The first for his discovery of micro-organisms, which the air, as a vehicle, conveys to wounds; and the latter for the changes he has wrought in practical surgery.

In midwifery he thought, as in surgery, cleanliness was the most important thing to observe. Get rid of the blood, which, when dead and decomposing, was so dangerous. Dr. Parvin says that he will remove an ovarian tumor to-morrow, and his greatest care will be to remove from the abdomen of the patient, as carefully as he can, every drop of blood which has escaped into it, and if this is impossible, to render aseptic any which is left, to prevent, if possible, its fermentation and putrefaction.

Other remarks on the subject were made by Drs. J. Herbert Claiborne, of Petersburg, Wm. C. Dabney, of University of Virginia, R. A. Lewis, of Richmond (who spoke of the production and effect of ptomaines), and others, going to show that other diseases than puerperal septicæmia, and other poisons than those developed outside of the patient's body, might give rise to puerperal septicæmia—such as diphtheria, erysipelas, decomposition of retained membranes, etc.

Dr. J. F. Winn, of Richmond, Va., reporting on *Advances in Diseases of Children*, limited his paper to

INTUBATION OF THE LARYNX IN DIPHTHERIA AND MEMBRANOUS CROUP AS A SUBSTITUTE FOR TRACHEOTOMY.

After considering the difficulties attending tracheotomy and its high rate of mortality, he stated generally that the favorable results, so far, indicated that intubation would supersede tracheotomy in the conditions named. Mentioning the recent modifications in the tubes, he described the manner of their introduction, and followed with the statistics as far could be obtained up to the time of reading his paper. These embraced the published reports of Dr. O'Dwyer's cases in New York, Dr. Waxham's in Chicago, and those of others. A recent letter from Dr. O'Dwyer reports fifty cases, with recoveries—one in four. Dr. Waxham, in a private letter of October 23, 1886, reported thirteen new cases with six recoveries, which, added to his published cases, make a total of ninety-six cases with twenty-nine recoveries—30.20 per cent. One of these recently-cured cases was an infant, aged nine months. Dr. Waxham says, in his letter to Dr. Winn, "I hope you will correct the impression that intubation is performed early. I have never known tracheotomy to be performed under more discouraging circumstances than has intubation, from the first to my last patient."

Dr. Winn concluded his report by citing eleven propositions in favor of intubation over tracheotomy, and expresses the belief that we have every reason to regard O'Dwyer's method as a great advance in the treatment of diphtheritic and croupous stenosis, and that we, as a profession, must not forget our indebtedness to Drs. O'Dwyer and Waxham for their labors in perfecting this operation.

Dr. H. M. Clarkson, of Hay Market, Va., read a paper on *Chloroform and Chloral in Childbirth*, recording many useful clinical experiences, and concluding with conviction that the

physician who now would withhold these agents to annul or lighten the throes of labor, is either culpable of neglect of duty, or else shows himself to be ignorant of facts with which he should be familiar.

Adjourned to 7½ P. M.

SECOND DAY—Night.

ELECTION OF OFFICERS.

The following were elected for the ensuing annual term:

President, Dr. Bedford Brown, of Alexandria, Va.

Vice-Presidents in the order named:—Dr. Alexander Harris, of Jeffersonston, Culpeper county; Dr. Herbert M. Nash, of Norfolk; and Dr. L. Ashton, of Falmouth.

Recording Secretary, Dr. Landon B. Edwards, of Richmond, Va.

Corresponding Secretary, Dr. John F. Winn, of Richmond, Va.

Treasurer, Dr. Richard T. Styll, of Richmond, Va.

Chairman of Executive Committee, Dr. Wm. W. Parker, of Richmond, Va.

Chairman Committee on Nominations of Applicants for Fellowship, Dr. Wm. D. Turner, of Ferguson's Wharf, Isle of Wight county, Va.

Chairman Committee on Publications, Dr. Chas. W. P. Brock, of Richmond, Va.

Chairman of Necrological Committee, Honorary Fellow, Dr. Samuel C. Gleaves, of Wytheville, Va.

To Deliver the Annual Address to the Public and Profession, Session of 1887, Dr. Wm. S. Christian, of Urbanna, Middlesex county, Va.

Subject for General Discussion, Session of 1887: SCHOOL HYGIENE.

Leader in Discussion, Dr. Hunter McGuire, of Richmond, Va.

Place of Meeting of Session 1887: Richmond, Va.

Time of Meeting: To be decided by Executive Committee, so as not to come in conflict with the Virginia State Agricultural Fair—some time about the last of October or the first of November, 1887.

Delegates to American Medical Association and other Societies: To be appointed by the President-elect.

Nominated to the Governor as Examiner from the State-at-large on the Virginia State Board of Medical Examiners (to fill unexpired term of two years of Dr. Wm. C. Dabney, who

recently resigned his position on the Board because of being elected Professor in the University of Virginia), Dr. I. S. Stone, of Lincoln, Loudoun county, Va.

Dr. Rawley W. Martin, of Chatham, Va., the retiring President, was elected an *Honorary Fellow* of the Society.

Dr. C. W. P. Brock, of Richmond, Va., introduced the following preambles and resolutions, which were unanimously adopted:

"*Whereas*, There is evident need for a State General Hospital in the State of Virginia;

"*And whereas*, The General Assembly of 1885-6 showed a willingness to appropriate funds for the establishment of such a Hospital;

"*And whereas*, The Medical Society of Virginia is the proper body to make recommendations relating thereto; therefore,

"*Resolved* (1), That the President of this Society shall appoint a Committee of five Fellows to consider the subject, and report during the present session the result of their deliberations.

"*Resolved* (2), That any Fellow of this Society shall have the privilege of appearing before the said Committee while in session, and present his views on the subject.

"*Resolved* (3), That the said Committee, if they think favorably of the suggestion, shall designate a location for the said hospital, and have prepared a suitable bill for presentation to the General Assembly of Virginia, providing for the organization, maintenance and government of said hospital."

The President appointed, as the Committee called for by the resolutions, Drs. C. W. P. Brock, H. M. Clarkson, John S. Apperson, Alex. Harris, and John Grammer—the said Committee to report to-morrow.

Dr. Richard T. Styll, of Richmond, Va., presented his report, as Treasurer, for the fiscal year just ended, showing the Society out of debt, and with a balance of \$213.11 on hand.

On his motion, also, the clause on the bills of the Treasurer, stating that parties who do not pay within ninety days after the end of a session shall be dropped from the Register of Fellows, was rescinded.

Dr. John S. Apperson, of Town House, Va., read his report on *Advances in the Practice of Medicine*. Beginning with a consideration of some of the "reflex neuroses," he instanced some of the recent views regarding the pathology and treatment of *hay-fever* as a decided advance. Ord's theory

as to the cause of *pyrexia*—that it is chiefly due to the fact that new tissues are *not* built up to replace disintegrated tissues, and that the heat which should have been used up, accumulates in the body, and raises the temperature, was dwelt upon. The necessity for the exercise of caution in the use of *antipyrin* was pointed out. The subject of *bacteriology* engaged a full share of attention; the work of *Pasteur*, with regard to *hydrophobia* and its prevention or cure, was well reviewed, and is believed to be an advance.

THIRD DAY—*Morning.*

Dr. R. M. Slaughter, of Theological Seminary, Fairfax county, Va., presented the *Report on Advance in Chemistry, Pharmacy, Materia Medica, and Therapeutics*. He gave much of the recent literature on the newly-discovered physiological alkaloids—leucomaines; and spoke of their relation to antogenesis of certain diseases. Under the heading of Chemistry, he pointed out that *lanolin* was described in the "Pharmacopœia of Florence," issued in 1590. The Report is too full of details to follow it through. Such items are noted as, how to mask the taste of oils; how to deodorize iodoform; how to preserve chloroform, etc. Under materia medica and therapeutics, the many uses of cocaine, the value of nitro-glycerin in angina pectoris, and of a five-per-cent. solution of antipyrin as a hæmostatic, etc., are detailed. Hypnone and urethran are spoken of favorably as hypnotics. Sparteine sulphate, as a cardiac tonic, is mentioned among the new things. The experiments now being conducted with salol or salicylate of phenol as an antipyretic, antiseptic and anti-rheumatic, and with kola as a stimulant, and a prophylactic against dysentery, are recorded.

Dr. Jacob Michaux, of Richmond, Va., read his report on *Advances on Obstetrics*. He first noted the rhythmical contractions of the gravid uterus—a sign first pointed out by Mr. J. Braxton Hicks, of London. Mr. Lawson Tait declares it to be a more certain one than any other; and can be appreciated by laying the extended palm gently upon the abdomen of the woman, when there will be observed perfectly apparent, alternate, rhythmical contractions and relaxations of the organ, by which, at one time, it will be "hard as a cricket-ball, and at another, soft as a cushion." He next described Hegar's sign of pregnancy, and quotes Dr. E. H. Grun-

din as saying that this condition is the most reliable of the earlier signs, and consists of the increased transverse diameter of the uterus, as revealed by bi-manual examination and the rectal touch. Electricity as an oxytocic was next noticed, and its methods of application fully described. The treatment of puerperal fever is claimed to have been improved by the use of antipyrin to reduce temperature. Dr. Mundé believes that this drug owes its value to its action as a sudorific. He also advises the use of the ice-water coil over the abdomen to reduce local inflammatory action. The use of the curette to remove decomposing secundines from the cavity of the uterus, to be followed by antiseptic douches, carefully administered, and discontinued as soon as the cavity is found to be clean, is believed to be proper and safe.

Dr. Bedford Brown, of Alexandria, Va., presented "*A History of My Personal Experience in the Observations and Treatment of Puerperal Eclampsia during a Practice of Twenty-five Years*," covering a record of twenty-five cases. Among other things, attention is called to the value of veratrum viride in checking the convulsions.

Synopsis of the Article on *Malarial Hæmorrhage* by O. F. Manson, M. D.

The author first gives a resumé of the history of hæmorrhage occurring as a phenomenon in connection with malarial fever from the time of Hippocrates to the present day. He gives *in extenso*, the facts in relation to its seat, frequency, mortality, type, diagnosis, prognosis, anatomy and treatment. The symptoms varying, according to the organ from which the hæmorrhage proceeds, from the simple benign epistaxis down to the gravest forms occurring in paludal fever, in which the flow of blood proceeds from the lungs, stomach, intestines, uterus and kidneys, are minutely detailed, to which are added illustrative cases terminating in health and death. From this collection of facts he endeavors to prove that hæmorrhage has never been until recently regarded as a prominent or diagnostic symptom in malarial disease; that with the single exception of epistaxis, a common result of arterial tension in many diseases and even in conditions such as plethora, scarcely worthy the name of disease, that hæmorrhage from vital organs in malarial disease has been a rare occurrence, and that although a certain number of cases of its various forms may be gleaned from the vast field of medical literature, still it has been considered by all rather as an anomalous and unexpected event, in short that malarial intoxication has never been classed among hæmorrhagic dis-

eases until within the latter half of the present century. During this period, however, the scene has altogether changed. Organs which previously had been those most rarely represented as the sources of hæmorrhage—the *kidneys*—now play the most important rôle in malarial fever, and the so-called malarial hæmaturia has assumed a fearful interest from its frequency and fatality. The writer confidently asserts that before the year 1850 that the cases of hæmaturia having the remotest connection with malarial disease may be counted upon one's fingers, whereas since that date it has appeared almost simultaneously from the western boundaries of our country to the distant islands of oriental Africa, as a sporadic endemic and epidemic disease. The writers view of the comparative infrequency of this disease from the time of Hippocrates down to the present century is based upon the fact that although he has perused the works of nearly every distinguished authority on malarial disease to be procured in America or in Europe, embracing the contributions of 23 centuries, not more than six writers make the slightest allusion to it, whilst since that period he has collected contributions of more than 70 writers who have devoted many pages to the subject and which united would form several large volumes.

From this array of facts the natural and inevitable inquiry arises as to the causes of the recent frequency and fatality of this last form of malarial hæmorrhage which the writer discusses at length. Finally the various methods of treatment which have been found to be most successful by those possessing the greatest experience in this and other forms of malarial hæmorrhage are related.

The writer in closing expresses the hope that his contribution may stimulate others possessing greater opportunities of observing malarial hæmorrhage to investigate the subject more fully in order that its pathology may be perfected and its therapeutics improved.

Dr. M. A. Rust, of Richmond, Va., continued his *Remarks on the Etiology of Zymotic Diseases* from the second part of a paper on the same subject, read before the society last year. Striking traits of bacterial life are illustrated; their way of entrance into the human organism, their physiological and chemical action, their production of ptomaines, are dwelt upon. The question of the *constancy* or *inconstancy* of bacterial forms is discussed. *Mutability* or the theory according to which the pathogenic microbes are regarded only as transmutations of the common bacteria is shown not to be

sufficiently supported by facts. Once upon a time the microbes of human diseases, like all other organisms, must have been evolved—and the supposition is reasonable, that they were evolved in the dim past when the rising human civilization, by its concomitant accumulations of filth has prepared the fostering ground for the development of those specific microbes. It is admitted that bacteria do change forms—but these transformations move within a well defined circle—the constancy of the type being always preserved. Like all other organisms, man and the human mind included, bacteria are acted upon by the medium in which they are placed—and their physiological and chemical action is accordingly modified. Dr. Rust finds the most fit medium, the most fertile fostering ground for bacterial life in the crowded, pent-up and walled in city houses, into which no sunshine penetrates, and where no draught passes to expel the vitiated, ever stagnant air. He enters into a consideration of the action of bacteria on the various articles of food—but having already exceeded the limits of his time, closes his paper, promising its continuation.

Dr. Joseph A. White, of Richmond, Va., read a paper on the *Results of Clinical Work at the Richmond Eye, Ear, Throat and Nose Infirmary, with Practical Remarks*. He referred only to eye-work, and reported 3729 cases, of which 2857 were diseases of the anterior portion of the eye, and which ought to be diagnosed and treated by any practising physician, without reference to the specialist. Corneal diseases predominated over any other class, and were especially frequent among negroes. One thing of special interest in regard to this race, was the fact that Dr. White had never seen, in all his experience, a case of trachoma or granular lids among them. He gave the results of his experience as to the best treatment for the commonest affections of the eye, such as blepharitis, purulent ophthalmia, phlyctenular ophthalmia, etc. Under the head of “errors of refraction,” he referred to the increase of near-sightedness among children from imperfect school hygiene, and to the importance of correcting it early. The operations performed on the eye in the Institution were 1227 in number. There were 102 extractions of cataract. All were successful in restoring useful vision except one case, which had partial atrophy of the optic nerve, resulting in complete atrophy. Four of the 102 cases were over 80, and 32 between 70 and 80 years of age, and yet all made good recoveries. Dr. White was of the opinion that extrac-

tion without iridectomy was not applicable to all cases, as some recent writers seem to think. He also laid great stress on the method of opening the capsule, and entered into other details of this mode of operating. He has tried Mitchell's method of dressing, in nine cases, and concludes that it is not suitable to childish or intractable patients, although he was much pleased with it in docile and tractable cases. Cocaine has been used in about 50 cases of cataract extraction, and in other operations, aggregating several hundreds; and although two per cent., four per cent. and even ten per cent. solutions have been used with great freedom, he has never yet had any ill effects from it beyond a dizziness, and abrasions of the epithelium of the cornea. He always dissolves cocaine in a solution of bichloride of mercury (1 to 5000), and has never seen ulceration of the cornea from it.

Dr. John Grammer, of Halifax C. H., Va., having delegated the *Report on Therapeutics, Materia Medica, Chemistry and Pharmacy* to Dr. R. M. Slaughter, of Theological Seminary, Va., offered a paper on "*Some of the Obstacles to the Progress of Therapeutical Truth.*" After citing the want of agreement as to the true nature and action of calomel and quinia, as instances of the difficulties in the way of therapeutical progress towards definite and fixed principles, he defined those obstacles as natural and artificial. The natural due to the inherent difficulties of the subject; the artificial, to carelessness and inaccuracy of observation, fallacious reasoning, and thoughtless inconsistencies in practice. As the most important instances of the latter, he dwelt upon the too little reliance upon the powers of nature, and too great dependence upon the resources of the *Materia Medica*. He then took up, successively, subservience to authority, indiscriminate acceptance of authorities, adherence to routine, disregard and ignorance of the antagonistic, modifying, and adjuvant action of medicines upon each other, upon the subtle variances of the system in health and in disease, and upon the various articles of diet, then the subject of diet itself, and, lastly, he made a brief allusion to the sexual instinct and relations as too much ignored, both in diagnosis and treatment.

Dr. A. Z. Koiner, of Roanoke, Va., read the *Report on Advances in Hygiene and Public Health*.

In the *Report on Advances in Gynæcology*, Dr. Hugh M. Taylor, of Richmond, Va., the chairman, limited his report to the subject of "*Nervous Mimicry.*" The first part of the report discussed mimicry of diseased joints. Cases representing the differential diagnosis and different phases of such

mimicries, and their intimate and important bearing upon the study and practice of gynæcology were reported.

The second and most important division of the subject dwelt upon, was the part the mind and imagination plays in the production and augmentation of gynæcological troubles and the influence of mind over mind in their cure. Encouragement was thought to be one most valuable remedial agent at the command of the gynæcologist. The reporter took the position that if patients of a neurotic temperament could honestly imagine that they had a diseased joint, and suffer as much; if they could present mimicry of pregnancy tumors, aphonia, deafness, blindness, paralysis, etc., that it was just as possible for them to concentrate their morbid impressions upon some of the pelvic organs and successfully mimic their common disorders. He thought it was no easy matter always to say positively that the reflex phenomena associated with and in most cases attributed to ovaritis, etc., are due to changes in the pelvic and not in the digestive or nervous system. This position, he thought, was sustained by the frequent occurrence of recoveries after Battey's operation had been advised, and he was satisfied that not a few such cases had been made the subject of Battey's operation when there was no necessity for it. He had seen patients wearing pessaries who had no appreciable pelvic trouble; had seen others consigned to a life of invalidism because they imagined that they had womb disease. He was satisfied that he had cured some such cases by assuring them that their cases were curable, and by the administration of continuous and large doses of *encouragement*. A number of cases were reported in which recovery followed an impression made upon the patients, to the effect that they would get well, were getting well, and finally were well. He thought that in not a few gynæcological operations some of the good resulted from the stimulus of hope infused by representations of the benefits to follow the operation.

Dr. I. S. Stone, of Lincoln, Loudoun county, Va., read a report on "*Advances in Psychology and Neurology*." The subject of psychology was briefly alluded to, showing our dependence upon mental effect for success in the practice of medicine. It was claimed that the ancient physicians depended largely upon such influence. The various popular humbugs of the present day were alluded to as illustrating the readiness with which the human mind is influenced. The close relation of psychology with neurology was shown as bearing upon the latter part of the subject—*cerebral localization*.

A short history was given of the experiments leading to correct location of brain lesions. Thus the experiments of Flourous in 1822. The electrical stimulation of the cortex of the brain by Fritsch, Hitzig, and Ferrier and others. Also the discovery of Broca and others of definite motor centres, and their perfection in the hands of Charcot and Lucas Championnière. Charts were used in illustrating the most important fissures and convolutions, and their relations to external landmarks upon the living head. The reporter claimed that the most capable authorities maintain the claims of the doctrine of cerebral localization as established.

Dr. Joseph Taber Johnson, of Washington, D. C., by invitation, presented a *History of Fourteen Cases of Abdominal Section, with Remarks on Ovariectomy, and the Methods of British Operators*, as observed by himself during a protracted vacation during the past summer. Of the fourteen cases in his own experience, there have been twelve recoveries—one case being under observation at this writing. He thinks experience in operating a great help to success in ovariectomies, etc. Most of the failures of eminent authors have occurred in their earlier experiences. Much is attributed, also, to the character of the operation performed; but much more to the *little things* in individual cases, which are suggested by experience to be alone suited to the case in hand. This paper was an exceedingly entertaining one, as it was full of descriptions of the methods and modes adopted by many of the great British gynæcological surgeons. We hope to be able to present the paper in full in our December issue.

Dr. Frank Donaldson, Jr., of Baltimore, Md., by invitation, read a paper which we publish in full under the head of "Original Contributions" in this issue. (See page 538.)

Dr. Archer Atkinson, of Baltimore, Md., by invitation, read a paper on *Blind External Fistula*, which was well illustrated with the records of the cases. After remarking upon the frequency of piles, fistulæ, etc., and the most frequent seat of fistulæ, he said that abscesses about the rectum were the most frequent causes of fistulæ in ano. He then referred to some of the general causes, gave a definition, and described some of the varieties of such fistulæ, etc., and concluded with some remarks on the importance of the subject in applicants for life insurance policies.

Dr. Charles R. Cullen, of Hanover county, Va., and Dr. William C. Dabney, of University of Virginia, presented papers by titles, which were referred to the Publishing Committee.

Dr. Chas. M. Shields, of Richmond, read a paper titled *Experience with Some of the Recent Suggestions in the Treatment of Eye Diseases*. He first described the method of treating granular lids by squeezing out the contents of the follicles, as suggested by Dr. Hotz; but preferred to evacuate the trachoma follicles with May's forceps, designed for this purpose. He employs some astringent—as sulphate copper or nitrate of silver in conjunction, but thinks that the squeezing-out process very materially shortens the treatment. Massage, as applicable to the eye, was the next subject considered. In hastening absorption of opacities of the cornea, especially in those cases of interstitial keratitis, where, after the subsidence of inflammation opacity remains, he had obtained better results from its systematic employment than from any other measure. Dr. Shields reported favorable results from the adoption of Michel's modified after-treatment of cataract extractions in substituting a strip of isinglass or gold-beater's skin-plaster instead of the usual bandage to close the lids. His experience had induced him, in suitable cases, to go a step further in modifying the customary after-treatment—*i. e.*, in patients whose digestion would be impaired and vitality lowered by the usual five or six days confinement to bed. He allows them to sit up the day following the operation, only cautioning them against sudden jars or movements.

A paper on *Evisceration of the Eye, Especially in Connection with Sympathetic Ophthalmia*, was read by Dr. Philip Taylor, of Richmond, explaining the permanent insertion of a hollow glass sphere within the eviscerated sclerotic (eye-ball); also relating three of his own cases which gave successful results. Especial emphasis was laid on the thoroughness of the operation in removing all the contents of the eye-ball, and then the washing out of the same by a pint or more of a disinfectant solution. The light glass sphere is then securely stitched within the sclerotic coat, the rotundity of the eye-ball is preserved, and a glass eye when inserted has the appearance of the normal eye, and not repulsive, as is usual. Also, in case of mischief following, enucleation can be as readily performed as before evisceration was done, for the rotundity of the eye-ball is the same (or very nearly so) in either case. The artificial eye is given better motion in this method of evisceration.

Dr. Robert J. Preston, of Abingdon, Va., presented a paper on *Electricity in Post-Partum Hæmorrhage*. The sole objection that could heretofore be used against this agent was

that we did not have time to wait to get a battery when post-partum hæmorrhage began. That objection is now gone, as there are many portable batteries. Every accoucheur should carry an electrical battery with him to cases of labor, as it may be useful in other conditions than post-partum hæmorrhage. While other remedies may fail to act in contracting the womb promptly, electricity cannot fail to do so, and it acts instantly—as soon as the current is established. Its action, too, can be kept up for hours, if necessary, thereby securing permanent contractions of the uterus, without the risk of the nauseating effect of ergot, etc. Place one electrode over the lower portion of the sacrum, and the other over symphysis pubis, and open the current, which will then pass directly through the uterus, and, contracting it, expel all non-adherent clots and other extraneous matter.

Dr. B. M. Walker, of Danville, Va., reported a *Case of Salivary Calculus*, which was somewhat unique as to some of the signs and effects. His remarks impressed the importance of surgeons and physicians paying more attention than they usually do to “these little things.”

Dr. R. A. Lewis, of Richmond, Va., read a paper on *Medical Experts*, showing that, while in some States, physicians called on to testify as experts, can demand fees for such service, doctors of Virginia cannot decline to testify except at the risk of being charged with contempt of court and fined. His paper concluded by urging legislative action to give the medical expert in the State of Virginia the same protection of the law.

Dr. C. T. Lewis, of Culpeper, Va., read notes of a case of a young man from whom fourteen inches of the small intestine sloughed away, and passed per rectum, with a measurable degree of recovery, strength, etc.

Adjourned to a magnificent banquet, where several hours were spent in feasting and toasting, after which the Session was adjourned *sine die*.

STATE BOARD OF PHARMACY.

The Virginia Board of Pharmacy, which was appointed by the Governor last March, in accordance with the “Act to Regulate the Practice of Pharmacy,” passed by the Legislature last winter, met in the Hall of the House of Delegates at the Capitol, in Richmond, Va., on the 5th of October, for the purpose of examining candidates to be licensed

to practice pharmacy. The Board was in session three days. They examined twenty-one candidates, and passed seventeen. The candidates were examined on *Pharmacy*, *Chemistry*, *Materia Medica*, and *Posology* and *Toxicology*.

The names of the successful candidatee are as follows:

Joseph P. Hall, Suffolk, Va.	W. E. Horner, Hicksford, Va.
Geo. S. Aldhizer, Broadway, Va.	Orland Edmonds, Warrenton, Va.
D. W. Penick, Culpeper, Va.	Winston L. Parkinson, Warrenton, Va. •
W. N. Berkeley, Staunton, Va.	J. B. Bradfield, Alexandria, Va.
W. F. Eanes, Richmond, Va.	R. S. East, Richmond, Va.
George M. Allen, Clover Depot, Va.	Wm. C. Partin, Onancock, Va.
H. Lee Conter, Warrenton, Va.	Geo. L. Bell, Staunton, Va.
W. F. Simpson, Raleigh, N. C.	

These were all presented with handsome lithographed certificates, signed by every member of the Board.

The following named gentlemen compose the Board:

T. Roberts Baker, Richmond, *President*.

J. W. Thomas, Jr., Norfolk.

Edgar Warfield, Alexandria,

Robert Brydon, Danville.

E. R. Beckwith, Petersburg, *Secretary*.

The Board adjourned, to meet in Richmond on the 25th of March, 1887, when those who had filed applications for examination, but did not present themselves at the last meeting of the Board, together with any others who may desire to be examined, should be on hand.

In accordance with one of the provisions of the law, all those who failed to pass at the last examination, can have another examination without the payment of an additional fee, but the second examination will be final so far as the fee is concerned.

The Board decided to take stringent measures to have the law enforced throughout the State.

Bromidia.—J. Lindsay Porteous, M. D., F. R. C. S. M. R. C. P. Edin., In the April No. of *Edinburgh Med. Journal*, says that *bromidia* has been used for some time by my colleague (Dr. Proudfoot) and myself, and he gives the results:—“About eighteen months ago a friend from America told me of the wonderful effects of a medicine, much used in the States, called *bromidia*. I obtained some, and have ordered it regularly for over a year; and have found it excellent in the pain of rheumatism, pneumonia and cancer; also in the sleeplessness of scarlatina and alcoholism. It has never failed me in procuring sleep without the disagreeable dreams and after-effects of opium. †The dose is ʒss. to ʒj every hour till sleep is procured.

Book Notices.

Treatise on the Principles and Practice of Medicine. By AUSTIN FLINT, M. D., LL. D., late Professor of Principles and Practice of Medicine, and of Clinical Medicine, Bellevue Hospital Medical College, etc. Sixth Edition, Revised and Largely Re-Written by the Author. Assisted by WILLIAM H. WELCH, M. D., Professor of Pathology, Johns Hopkins University, and AUSTIN FLINT [JR.], M. D., LL. D., Professor of Physiology, Bellevue Hospital Medical College, etc. Philadelphia: Lea Brothers & Co. 1886. 8vo. Pp. 1,160. Leather. (From Publishers).

When the great physician who wrote this book, as the result of nearly fifty-five years of observation and study, died, he had, fortunately for the profession, about finished the revision, and was ready for the publishers. No physician that ever lived in America has so left the imprint of his trusty teachings upon the memory of his pupils, as Dr. Flint. Always himself an active, earnest student of medicine, he was ever found leading the advance line of medical authors; and his opinions went forth to guide the world of medical students following close behind him.

In comparing this sixth with the fifth edition, we find a number of entirely new articles, the omission of all that had become obsolete, the thorough revision of many chapters, and a most decided improvement in every particular. So that *any* medical student or practitioner wanting a text-book on practice of medicine deprives himself of a great and valuable opportunity who does not at once possess himself of this work. One may almost blindly follow its teachings without the fear of erring from the best path as at present understood. We most unqualifiedly recommend this "treatise" to any one in need of a standard text-book on "practice."

Electrolysis, Its Theoretical Consideration and its Therapeutical and Surgical Applications. By ROBERT AMORY, A. M., M. D., M. D., Member Massachusetts Medical Society; Fellow American Academy Medicine, etc., etc. 8vo. Pp. 313. Illustrated by nearly one hundred fine Wood Engravings. Supplied only to subscribers for "Wood's Library of Standard Medical Authors," for 1886 (12 vols., price, \$15 00), of which this is Vol. VIII. New York: William Wood & Company.

Electrolysis is "on the boom" for almost every conceivable purpose, and its possible uses have not yet been half numbered. This book comes in, therefore; most *apropos*, to furnish information that can be got now only by raking out a little here and a little there from the piles of journal ex-

changes, etc., that come into an editor's office. There are many doctors who are unable to purchase all of the annual volumes of "Wood's Library," and yet who would be glad to get this book. It is the book needed on the subject; and we trust that the Author and present Publishers may agree upon some plan for an independent publication of the work. It would do great good, and help very materially to advance scientific study and observation in the line of electrolytic therapeutics.

Laboratory Guide for Urinalysis and Toxicology. By R. A. WITTHAUS, A. M., M. D., Professor of Chemistry and Physics, Medical Department, University of City of New York, etc. New York: Wm. Wood & Co. 1886. Pp. 75. Cloth. (From Publishers).

Every other page of this flap-paged book is left blank, we suppose, for notes by the student. The first forty-two pages are taken up with urinalysis—precise directions for examinations, etc., tersely stated. The rest of the book is taken up with descriptions of methods as to how to detect poisons—mineral, vegetable and volatile. Of course a *thorough* index as to the names of the poisons, etc., has to be added to make the great amount of information which this book contains available, and such an index is appended.

Analysis of the Urine, with Special Reference to the Diseases of the Genito-Urinary Organs. By B. HOFFMANN, Professor in the University of Gratz, and R. ULTMANN, Docent in University of Vienna. Translated by Drs. T. BARTON BRUNE, of Baltimore, Md., and H. HOLBROOK CURTIS, of New York. Second Edition, Revised and Enlarged. New York: D. Appleton & Co. 1886. 8vo. Pp. 310. Cloth, \$2. (For sale by Messrs. West, Johnston & Co., Richmond).

This work has long been standard authority. But the late advances in urinology have made it necessary for the American Translators practically to become editors of a new or second edition. They have done their work well, and, in this volume, present the profession with a reliable, practical book, giving the most advanced ideas as to urinalysis and diagnoses of urinary troubles in simple language, which does not require a mastery of clinical technology to understand. The text is made the more simple as to the microscopical appearances of the urine in diseases by the appendix of eight well drawn and colored or shaded full page plate illustrations. Nothing of therapeutic suggestion is made in the book.

Treatise on Bright's Disease of the Kidneys, with Chapters on the Anatomy of the Kidneys, Albuminuria and the Urinary Secretions. By HENRY B. MILLARD, M. D., A. M., etc. Second Edition, Revised and Enlarged. New York: Wm. Wood & Co. 1886. 8vo. Pp. 264. (From Publishers).

We are very much pleased with the plain, practical character of this book, while our knowledge of the author's ability and opportunities for study gives us confidence in his teachings. Not only is this work useful to the scientist and theorist, but is an exceedingly helpful book to "the busy practitioner" who seeks to know in a sentence or two the points of diagnosis and the best suggestions as to therapeutics. We commend this book to the special consideration of any physician in search of a work on Bright's and other albuminuric diseases. In short, it is a treatise on *nephritis*—acute and chronic, catarrhal, interstitial and suppurative.

Practical Guide in Antiseptic Midwifery, in Hospitals and and Private Practice. By HENRY J. GARRIGUES, A. M., M. D., Professor of Obstetrics, N. Y. Post-Graduate Medical School and Hospital, etc. 1886. George S. Davis, Detroit, Mich. 12mo. Paper. Pp. 128. Price, 25 cents.

This is one of the "Physician's Leisure Library" of which we have several times spoken favorably. But we cannot so highly commend the style of Dr. Garrigues as of some of the authors who have preceded him. We do not think a book-maker ought to call upon the purchasers to pay for the distribution of his circular of self-defense against attacks which the purchaser never made. The several pages, beginning page 13, have no business in a book on a special subject, intended to be sold. Dr. Garrigues is a strong "localist" in theory as to the origin of puerperal septicæmia, and in teaching, he is full of minute detail as to what should or should not be done in the way of treatment. There are many points of useful direction in this monograph.

Mechanism of Indirect Fracture of the Skull. By CHARLES W. DULLES, M. D., Surgeon to Out-Patient Department, Hospital of University of Pennsylvania, etc. Philadelphia: 1886. Paper. 8vo. Pp. 55. (For sale by Messrs. P. Blakiston, Son & Co., Philadelphia, Pa).

This "reprint" from the *Transactions of the College of Physicians of Philadelphia* is illustrated by twenty-seven plates, showing the effects of fractures. Dr. Dulles analyzed 119 cases of fracture, all except eight of which are, in their

effects, explained by the German "bursting theory"—that is, "the conversion of direct depressing force into an indirect disruptive force, brought about by a shortening of the axis parallel to the direction of the force, and a complementary lengthening of the axes at right angles to the former."

Outlines of the Pathology and Treatment of Syphilis, and Allied Venereal Diseases. By HERMANN VON ZEISSL, M. D., Late Professor at the Imperial-Royal University of Vienna. *Second Edition, Revised.* By MAXIMILIAN VON ZIESSL, M. D., Privat-Docent for Diseases of the Skin and Syphilis, at Imperial Royal University of Vienna. Authorized Edition. *Translated, with Notes,* by H. RAPHAEL, M. D., Attending Physician for Diseases of Genito-Urinary Organs and Syphilis, Bellevue Hospital Out-Patient Department, etc. New York: D. Appleton & Co. 1886. 8vo. Pp. 402. Cloth, \$4. (For sale by West, Johnston & Co., Richmond).

The title of this book is misleading, and will detract somewhat from its popular introduction among general practitioners. It is really a "Practical Treatise on Venereal Diseases"—just what they want. After a chapter of nine pages historical and descriptive of "the venereal contagions," ninety-six pages are devoted to "gonorrhœa" and its complications; then follows a section of thirty-six pages on "chancre," while some 250 pages are allotted to syphilis. The chief aim, it appears, of the authors is to impress the importance of a full knowledge of the pathology of the several venereal diseases, and then to instruct as to clinical characteristics and the appropriate treatment of each of these forms. We regard the book as an excellent text-book for student or physician, and hope to hear of its adoption as such—now that American books of anything like as much value are nearly out of print. In therapeutic detail, the recommendations are all good.

House-Plants as Sanitary Agents, Comprising also a Consideration of the Subject of Practical Floriculture, and of the Sanitary Influences of Forests and Plantations. By J. M. ANDERS, M. D., Ph. D., lately Lecturer on Botany in the Wagner Free Institute of Science; Assistant Physician to Episcopal Hospital, etc. Philadelphia: J. B. Lippincott Co. 1887. 12mo. Pp. 334. Cloth, \$1.50. (For sale by West, Johnston & Co., Richmond).

A half century ago, there was a popular belief that house-plants were breeders of disease; now it is being proven that living plants in the house are absorbents of disease germs floating in the air. Our author demonstrates the fact that

in-door living plants are even preventive of that deadly malady—consumption. We do not know when we have read a hand-book with more intense interest and profit. Every doctor ought to read it, and persuade his patients to read it. It gives information to all, and the reading of this book will encourage the cultivation of suitable house-plants in homes. We look upon the suggestions in this volume as a decided advance in science, and as such the teachings ought to be popularized. We hope this notice of this book will bear the fruit we desire to see ripen.

Manual of Obstetrics. By A. F. A. KING, M. D., Professor of Obstetrics and Diseases of Women and Children, Medical Department of Columbian University, Washington, D. C., etc. With 102 Illustrations. Third Edition. Philadelphia: Lea Brathers & Co. 1886. 12mo. Pp. 379. Cloth. (From Publishers).

This is about the best of the hand-books of recent compilation. It is “up to the times.” Such a book gives full guide directions to the students, while it is a memory-refresher to the practitioner suddenly called on to do something a little out of the ordinary way. When a doctor is called to a case of labor, it is well for him to take a book like this along with him, and spend the half hour or more he may wish to “wait in the other room” in looking over the possible “odds and ends” he may have to contend with in a given case. Such a review often serves all the purposes of a consultation at an hour of the night when he wants a bit of information, and yet does not care to arouse his brother practitioner from his repose. It is a good book.

Hand-Book of Practical Medicine. By HERMANN EICHHORST, Professor of Special Pathology and Therapeutics, and Director of University Medical Clinic at Zurich. Vol. I. *Diseases of the Circulatory and Respiratory Apparatus.* One Hundred and Three Wood Engravings. New York: Wm. Wood & Co. 1886. 8vo. Pp. 407.

This is Vol. III of “Wood’s Library for 1886.” The style of the author makes him begin, on opening to the first page, immediately with his subject. When the author has done his part so well, we regret that the Publishers do not issue successively succeeding volumes of the same work. The book before us is the first volume of a “Hand-Book,” so-called, which is quite popular in Europe, and will be appreciated in this country as soon as its merits are examined into. The author deals with his subject from a practical standpoint, and his therapeutic advice is almost always good.

Bright's Disease and Allied Affections of the Kidneys. By CHARLES W. PURDY, M. D., Queen's University, Professor of Genito-Urinary and Renal Diseases in the Chicago Polyclinic, etc. 8vo. 288 pages. With 18 Illustrations. Cloth, \$2. Philadelphia: Lea Brothers & Co. 1886.

This book possesses the rare advantage to the general practitioner of being very practical. For some reason or other, most authors of works on such diseases as those classed under the general heading of renal seem to think it essential to make their writings peculiarly technical, so that the reader, instead of sponging up his information, has to derive it drop by drop through a strictured technical channel. We congratulate the author that he has given a work thorough enough for the laboratory, chemical and microscopical student, and yet plain enough for the ordinary run of physicians to understand on reading. This book treats almost exclusively of organic diseases of the kidneys, which has albuminuria as one of its usual signs. Every practitioner will find this a valuable addition to his study and ready reference library.

Manual of Therapeutics, Considered with Reference to Articles of the Materia Medica. By EDWARD JOHN WARING, F. R. C. P., Surgeon Major (Retired) in Her Majesty's Indian Service. Edited by DUDLEY W. BUXTON, M. D., B. S., Lond., M. R. C. P., Assistant to Professor of Medicine at University College, London, etc. Fourth Edition. Philadelphia. P. Blakiston, Son & Co. 1886. Small 8vo. Pp. 666. Price, Cloth, \$3; Leather, \$3.50. (For sale by West, Johnston & Co., Richmond.)

This work has been before the profession for over thirty years, and no one who knows the nature of its contents would do without it. "Waring's Therapeutics" is made up mostly of excellent compilations from works of English authors—selecting their therapeutic suggestions. We note a table of errata which the publishers have been thoughtful enough to introduce—especially in regard to doses, etc. We would advise each purchaser to transfer the proper correction marks from this "errata" to the appropriate page, so that the reader may not be misled by the misprint. As to the value of this book, if our opinion were sought as to the most practicable, useful manual on Therapeutics lately published, we would unhesitatingly say, *Waring's Therapeutics*. Every practitioner—young and old—should have it and use it.

VIRGINIA MEDICAL MONTHLY.

[ESTABLISHED APRIL, 1874.]

RICHMOND, VA.

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LANDON B. EDWARDS, M. D.....EDITOR AND PROPRIETOR.

Original Contributions solicited from all sections; but the Editor does not hold himself responsible for the views of authors.

Articles contributed to the pages of this Journal must not be duplicated in other journals by the author without proper credit being given to the Virginia Medical Monthly.

Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

Medical Society of Virginia.

The recent session of the Medical Society of Virginia, the proceedings of which we report at much length in this issue, was a great success. It was a loss long to be felt by those not present. We guarantee that those who listened to the discussions—for example, the one on puerperal septicæmia—felt themselves profited, and have gone back to their homes in a trim to think more satisfactorily for themselves, and to deduce more clear-cut opinions regarding the subject than they ever had before. When the proposition for the establishment of a State General Hospital was under consideration, and being so unanimously favored, one could not fail to be impressed by the thought that after all doctors are public benefactors, and are striving to be helping citizens to the very large class who cannot very well help themselves. The inimitable essay on School Hygiene—on “the bodies of our children”—has left its impress upon every hearer which will bear better and better fruit as time passes by, presenting ever and anon opportunities for practical improvement of the lessons taught. The admirable address, giving some hints in hygiene, gives serviceable information alike to the farmer, merchant, capitalist, professional man, etc.—to the *citizen*, in short—and thus will prove of long-lasting value to the State. And thus we might go on, if space permitted, making nothing but commendable reference

to each of the many papers presented during the session. The hospitalities of the citizens of Fredericksburg was something exceeding every idea of what might possibly be done for the pleasure of the 150 or so guests who were upon their hands to be entertained. Our want of space forbids the further dotting down of even reference to other things which go to make up the record, that the late session of the Virginia Society was more than ordinarily profitable, entertaining, hospitable and successful in a professional sense, and very valuable in its results as they will affect the citizen.

To the Rio Chemical Company,

of St. Louis, we wish to return our special acknowledgements for an expressed box of a full line of the articles regularly advertised in this journal. Their "Celerina" as a nerve tonic, "Aletris Cordial" as a uterine, "Acid Mannate" as a pleasant aperient, and "Extract of Pinus Canadensis" as a non-irritating mucous astringent have each, not only the endorsement of men eminent in the profession, but also the satisfactory test of long experience with the ordinary run of doctors.

Dr. Rawley W. Martin, of Chatham, Va.,

the retiring President of the Medical Society of Virginia, deserves the thanks of the profession of the State for indefatigable work and commendable success as the result of his year in office. Were every representative of the "Country doctor" as worthy of eminence as he, most of the aspiring "city doctors" would have to take position as privates in the ranks.

The Virginia State General Hospital Plan,

which this journal has so long been trying to have established as a State institution—just as its insane asylums, etc.—seems to be a thing soon to be carried out. Let every doctor in the State urge the measure upon his legislator. A good committee of the Medical Society of Virginia has been appointed to press the proposition, and all good citizens should help them in their labors.

Liebig's Beef Tonic Preparation.

"The opinion of the distinguished gynecologist, Prof. Paul F. Mundé, of the Liebig Co.'s Coca Beef Tonic Preparations heads the advertisement of this firm with this issue."

A New Journal in Virginia.

We announce with pleasure that our friend Dr. J. F. Winn, of this city, will, in a few days, offer the profession a "pointed, practical and progressive" medical journal, the title of which will be "*Practice*." Every article will be brief; his purpose being to give the practitioner the kernel of current experience and medical progress. Such a journal must be popular, and with the journalistic experience already possessed by him, we predict for his coming journal the success such an enterprise so richly merits. Those wishing to begin their subscriptions with the first number should forward their orders at once to Dr. Winn, accompanied with the price of subscription—in the reach of all—\$1.00.

The Medical Department of the University of Virginia

Starts off its present session with its two newly elected Professors with flying colors. "Progress" seems to be their watchword.

The "Biloxi Fever,"

Of Louisiana, according to the *New Orleans Medical and Surgical Journal* for November, 1886, is hard to classify—whether it was yellow fever or simple malarial fever. Whatever it is, it cannot be very fatal, for one of the local doctors, who had some thirty cases, looked upon them and treated them as he did malarial fever in Iowa, and has not lost a case. At any rate, at this season of the year no one can reasonably apprehend an epidemic of yellow fever in this country.

The Late Issue of this November Number

Is due to our desire to make as full notes as our space would allow of the proceedings of the recent session of the Medical Society of Virginia. The December number will be nearly on time.

Dr. Bedford Brown, of Alexandria, Va.,

The President of the Medical Society of Virginia for the current year, should receive this highest honor in the gift of his professional brethren of the State as an earnest expression of their appreciation of his merits, and of his untiring devotion to the promotion of the high aims of this State organization.

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Original Communications.

ART. I.—**Nervous Mimicry.*** By HUGH M. TAYLOR, M. D., Member of Virginia State Board of Medical Examiners; one of the Surgeons at St. Luke's Hospital, etc., Richmond, Va.

The subject of nervous mimicry is one of very general interest. Mimicked diseases may be met with by the general practitioner and specialist, but such cases are more commonly encountered in the field of gynæcology. The subject is by no means narrow in its scope, nor is it new. Some of the greatest minds that have ever graced our calling—notably, Brodie, Paget, Anstie, Tuke, Mitchell, Barlow, Skey, etc.—have found in it ample food for thought. Some of the smartest, as well as most ignorant charlatans, that have ever imposed upon credulous human nature, have found in this field a rich harvest; and but for the existence of cases of nervous mimicry, faith cures, mind cures, mad-stone cures, amber-bead cures, and such like, would never have occupied public and professional attention.

The limits of this report will not permit us to consider

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this subject in all of its phases. We can only allude to the mimicry of some diseases of joints; but we will dwell particularly upon the important part that the imagination plays in the production and relief of many symptoms, and effects of gynaecological troubles.

The following cases of hysterical joints, pseudo-arthritis, nervous mimicry of diseased joints, will serve to illustrate and introduce the first part of our subject:

CASE I.—Miss A., æt. about 16 years, is a young lady by birth, education, and association; and in addition to these blessings, has inherited their too frequent companion—a highly nervous organization. When four or five years old, she sustained a compound fracture of the lower third of the femur. The recovery from the accident was perfect; no deformity whatever resulted, and for ten years the occurrence of the injury had only been known to her through tradition. At the end of that time, however, the battery situated in her pelvis began to dominate over her system, and the first cord to give way under the strain was that supplying the locality of the old fracture. Suddenly one day she found, or rather conceived the idea, that she could not walk, and for four or five weeks she was under the care of physicians, who tried, without success, various treatments to relieve the pain, and restore loss of function of the joint. After remaining in bed for four or five weeks, she concluded that she could walk, and for several months she remained perfectly well, and went about everywhere. Again, without any assignable cause, she went to bed a cripple, and for a year or more, from that time, she was either confined to her bed, or only went about on crutches.

When she was admitted into St. Luke's, she was well grown, had the plump, rosy cheeks, and a well-rounded figure more often seen at sixteen than in the society belle of twenty. She had given up all hope of ever getting well, and seemed to combat all efforts for her relief. There was no perceptible deformity about the knee—neither wasting nor swelling of the parts. Every muscle and every tendon seemed possessed of its normal function, and nothing but the presence of a linear scar, scarce half an inch long, remained to show that she had ever been injured. The scar was soft and pliable, and was surrounded by but little, if any inflammatory deposit, or cicatricial contraction. Pressure over or around the scar produced pain, but it was noticed, as is usual in such cases, that pressure very slight was

as painful as when it was hard; and besides, she admitted pain could be induced by pressure on almost any part of the leg.

Another usual symptom in such cases, marked in this, was that the pain was never moderate; it was always excruciating, and was never lost sight of, unless her attention was distracted. The impaired function was never better nor worse, even after the most violent manipulation and exercise. After many examinations, the conclusion was reached that the trouble was in her nervous system, and not arthritis nor neuritis. Her crutches were taken from her, and persistent efforts made to induce her to walk. When she planted the foot of the afflicted leg, and threw her weight upon it, the knee would bend forward until it almost touched the floor. Upon every step her mind was concentrated, and it was evident that the awkwardness was due to nervousness, and not pain. Failing by encouragement and daily practice to induce her to walk, we filled a bottle with distilled water, marked it sulphate of strychnia, dwelt upon the danger and severity of the treatment, and every day injected, hypodermically, a few drops of the distilled water, in the neighborhood of the knee. This treatment, though tried for some time, was also without benefit; and we are inclined to think it was due to the fact that she heard something of the possible necessity of an operation, and after that nothing short of an operation would suffice. At last we gave her chloroform, put her on the operating table, and with a pair of scissors dissected off a piece of integument, including the scar. For two or three weeks we intentionally kept the little wound from healing, frequently dwelt upon the severity of the operation, its uniform success, and fully impressed her with the idea that she would be cured by it. By the time we were ready to let her get up, she was fully convinced of the success of the treatment, and sustained our prognosis by walking with comfort, and without deformity; and her relief, up to this date, has been permanent.

CASE II.—Miss B. came under our care in 1884. She had been an invalid for a year or more, and the last few months of that time she had spent in bed under treatment by rest and extension for supposed sacro-iliac disease. We remembered her as a society favorite, and had often been struck by her unusual powers of physical endurance. For hours we had seen the intoxicating effects of the waltz stimulate her to continued indulgence. She now complained of a constant, unrelenting pain over the left sacro-iliac joint, down the thigh,

in the calf of the leg and heel. With a face full of smiles she would tell of the agony she was then undergoing. Nothing could charm the pain away, and yet her severest pangs never produced a ripple indicative of suffering upon her placid countenance. She did not look like one suffering with organic disease, either inherited or acquired. She could walk about her room without limping, and could sit down as hard as any one. There was no rigidity of muscles or joint, no swelling, no rise of temperature, no pain from manipulating the joint of the afflicted side, and yet the slightest pressure on her hyperæsthetic skin was unbearable. One limb—one side of the pelvis was as much like the other as possible. Her pelvis was explored in every conceivable way. First her ovaries, then her uterus were treated—we know not for what—until finally it was forced upon us that there was no joint trouble, no pelvic disorder, but a perverted nervous condition. She was then told that her disease was cured—that she was suffering from the effects of long confinement, and that she must walk to restore the normal function and sensation to her joint. In about six months we succeeded in making her walk each day the distance of as many blocks, but only on crutches. She would walk about her room all day without pain or limp, and without assistance of any kind, but she insisted that she could not walk on the pavement without crutches.

About that time some friends offered to send her to New York to consult a deservedly eminent orthopedic specialist. That gentleman swung her up, demonstrated sacro-iliac disease to several others present, told her she had sacro iliac disease, wrote to us to the same effect, and advised treatment by rest, extension, etc. While in New York, she also consulted a gynæcologist, who wrote us he thought she was suffering with professional invalidism.

Accepting the views of the latter, which were in accordance with our own, when she returned home, we prescribed another course of walking, with frequent doses of encouragement. Several months after her return from New York, she visited Louisville, and there was placed under the care of a distinguished practitioner who applied a jacket to her spine, and a course of massage. She wore the jacket for only a few days, but submitted to the masseur for several weeks. After her return from Louisville, our treatment was in no way changed—exercise and encouragement. What brought matters to a crisis we are unable to say; but in three or four months after her return, when she was ap-

parently no better than she had been for a year, she suddenly threw her crutches away, and literally took to her heels.

We will not be surprised if some one suggests that a real disease of the joint, or some inflammatory deposit pressing on nerves did exist, and that the rest cured it, and that the walking did actually remedy the effects of long confinement and rest. We would admit the possibility of this, if her improvement had been slow and continuous; but such was not the case. Her recovery was sudden. Two weeks before she discarded her crutches she was as bad off as when she first began to use them. It may also be claimed that her trips—if they did no harm—built up her general health, and to that extent contributed to her recovery; but she was, for a long time before this, a picture of robust womanhood, and her general health was at no time much impaired. To persistent encouragement we must credit the cure.

CASE III.—A young lady, æt. about 20 years, suffered an injury to her knee joint, in sliding off a hay-stack. When admitted into St. Luke's, she had been on crutches for a year or more. There was now no appreciable redness about the joint, no heat, no swelling, but great hyperæsthesia, pain and rigidity. The patient was endowed with a peculiarly sensitive nervous temperament, but was very anxious to get well, and willing to make any co-operative efforts. Time and again her knee was examined without the discovery of any morbid change to account for her lameness. Finally, to make the examination more thorough, she was given chloroform, and by its aid the suspicion was confirmed that there was no inflammatory change going on in or about the joint. When she recovered from the effects of the anæsthetic, she was informed that the knee had been fixed, and in a short time she would be able to walk as well as ever. She was cautioned that it would take her some days to restore strength to the unused muscles and suppleness to the stiffened joint, but that this must be brought about by exercise, even if it increased the pain. She entered into the success of the treatment enthusiastically, and true to our predictions was walking all about the city in a week.

If any factor other than encouragement, and the influence of mind over mind contributed to her recovery, we failed to appreciate it. If there were old adhesions broken by the

examinations, we were not aware of it. Our conclusion was that there had been injury in the first instance, but after treatment and time had cured it, the patient failed to concede the fact that she was well, and successfully mimicked the real injury.

We will not be surprised if some are inclined to question if all the phenomena mentioned, as observed in these cases, were nervous in character and mimicries. We disclaim any intention to dogmatise on the subject, or to read in the cases more proof of our conclusions than they actually contain. Certainly it is not our purpose to imitate Lucilius' painting of the one-eyed prince, which, by portraying him in profile concealed it, and gave beauty and symmetry to the whole. We admit the possibility of a mistake; for few subjects are more difficult, as well as important, than the differential diagnosis of joints from those of inflammatory character. Nothing should embarrass us more than to find that we had been treating a hysterically diseased joint by fixation, extension, etc. And equally mortifying, and far more hurtful, would it be to insist upon exercise in a case of acute arthritis; and yet we fear such mistakes are by no means uncommon.

In each of the cases we have reported, either by ourselves or some one else, treatment for structural disease was advised or practised. Such mistakes will not be thought altogether inexcusable; for we recall the fact that all but one of the symptoms of inflammation may be mimicked, as well as the disease itself. Swelling often occurs in the hysterical joint, but it is claimed by some that it is confined to the integument, and is in the form of œdema in the cellular tissue, and can be moved as a whole over the joint. The movement of the swelling does not increase the pain, and is due to want of use and imperfect nutrition.

Rigidity of the joint is frequently seen in cases of nervous mimicry, and it is by no means easy to *decide* whether the rigidity results from adhesions, is muscular from the initiation of an inflamed joint, or is purely nervous in character. There is this difference often noticeable: In the early stages of joint disease, the motion is restricted and painful in cer-

tain directions, by which the specially inflamed ligaments are put on the stretch, while in the mimicked disease the rigidity is general, and, like the pain, is out of all proportion to the amount of movement, and other evidences of inflammation. Fixation of the joint in unnatural positions is not uncommon in the mimicked disease, and this fixation is apt to assume one or another of the usual deformities of the joint resulting from inflammatory changes. Even wasting of the joint, and the tissues near it, may be observed in mimicked cases; but while it may occur, it is not the rule—wasting being usually strongly indicative of inflammatory action. Wasting occurring in the mimicked cases is the result of non-use, and consequently impaired nutrition—that in the real disease being due, to a great extent, to inflammation. The pain in the mimicked disease is out of all proportion to the noticeable changes in the joint, is never moderate; is always excruciating, and never intermits.

By far the most noticeable symptom of mimicked disease of a joint is the absence of increased heat. Paget affirms that it may accepted as a positive rule, that an inflamed joint is a hot joint—certainly so, by comparison with its fellow of the opposite side, while in a mimicked arthritis the temperature is normal, and often subnormal.

In no department of medicine do we more frequently meet with mimicry of symptoms and diseases than in the field of gynaecology, and upon no class of patients is the influence of mind over mind more marked. The ability to distinguish between real and mimicked uterine, ovarian, tubal, or other pelvic troubles, enables the skilled diagnostician to effect cures that astonish, and makes him appear a wonder in the eyes of the suffering. It has been our experience to meet with not a few cases—and we think they are more common than is usually supposed—which had the consequent impairment of mind and body. Many have been bed-ridden for years; many vomited incessantly, complained of pain in back, belly, spine and head, even pain in thighs, pressure on the rectum and bladder, inability to walk, loss of appetite, sleeplessness, and in fact of all the varied and usual symptoms of some pelvic disease; and yet the closest examination

failed to detect local morbid changes to account for the invalidism. To conclude, in such cases, that the symptoms are mimics in character—that the seat of the trouble is in the nervous or digestive system, and not within the pelvis—is often a difficult matter. The experiences of the cleverest diagnosticians confirm this assertion, and we venture to advance the opinion that a larger number of cases should be classed under the head of nervous mimicry of pelvic diseases than is commonly done. In many cases in which the fact is not recognized, the origin of the trouble is extra- and not intra-pelvic; and we also venture to uphold the idea, that in not a few cases, in which there is recognizable pelvic disease, the morbid changes are secondary, and are due to reduced health, induced by errors of digestion, assimilation, neurasthenia, etc. The following cases, to our minds, are illustrative of the correctness of our conclusions:

CASE A.—Æt. about 21 years, was brought to St. Luke's on a cot. She had been in bed for a year or more; was supposed to be suffering with some spinal trouble, and had even worn a jacket for its relief, but the jacket had been abandoned, and treatment for uterine disease adopted. In spite of her long confinement, she was well developed, well nourished, and looked a picture of health; was a bright, pretty girl, and had the means and opportunity of enjoying life. Her face had none of the care-worn expression of suffering days and sleepless nights. *Per contra*, she was all smiles, all attention, and very much interested in everything around her, but was especially interested in her aches and pains, and never wearied of talking of them. She suffered pain in her back, thigh, pelvis and belly; had a poor appetite, bad digestion, and was constipated. She clung to the conviction that she could not sit up out of bed, and yet she could sit up and jump about in bed, and seemed to have an abundance of muscular power to do anything she wished while flat on her back. She would never admit that she was free from pain, and *that* always of the severest type. Under the impression that some pelvic trouble was present to account for her suffering, time and again her bladder, uterus, ovaries, tubes and rectum were examined, but without eliciting the slightest clue upon which we could base a diagnosis. Careful examination of the spine was also faultless. She menstruated regularly and normally, and did not suffer much

more at that time. Finally, after much patient study of the case, we reached the conclusion that the nervous system only was at fault, and that it was necessary to impress the patient with the belief that her case was curable; that she would get well, was getting well, and finally was well. Merely to seem to be doing something, her vaginal vault and neck of the uterus were painted with iodine several times a week, and efforts to get her out of bed at once were begun. Weeks were consumed in educating her to sit up in a reclining chair for a specified number of minutes. She would watch the clock, and the moment the time expired she would ring for the nurse to put her back in bed. Months were spent in making her walk across the room. Two of the house physicians—one on each side of her—walked, or rather dragged, her the length of the room so many times a day. Our language is inadequate to describe the contortions and girations she went through with in this walking treatment. Hardly a muscle of locomotion seemed under her will. She would plead to stop, but not with a face indicative of pain, but laughing, as if her conception of the whole thing was that of a frolic.

We do not impute that there was intentional fraud in this case. It was not a case, as Mr. Paget expressed it, "Of I will not, but a lack of will to will." Finally our persistent efforts were crowned with success, and she is now in the full enjoyment of robust health.

While exaggerated examples like this are by no means uncommon, we think there is a large class of cases, not perhaps so well marked, but none the less of a purely nervous character, and in which the manifest symptoms of pelvic troubles are undoubtedly mimics of real disease, and the following case is, we think, an example of this type:

CASE B.—Æt. about 30 years, had supposed herself a victim of womb disease for ten years, and the greater part of that time had lived the life of an invalid. True she was not always confined to her bed, but generally to the house, and she was thoroughly impressed with the idea that she was incapacitated for pleasure or work. She had run the gauntlet of the physicians within her reach, had tried numberless plans of treatment, but their successive failures to give her more than temporary relief had only deepened her impression that she was a hopeless invalid.

When seen by us she was badly nourished, dyspeptic and

morbid, and one of the most painfully nervous people we have ever met. She suffered constant and countless pains about the pelvis. Examination failed to reveal local trouble which could account for the pain, and symptoms of pelvic disorder, and the low standard of health. The only abnormal condition discovered was a little fibroid on the antero-lateral surface of the uterus, and we failed to see how, in any way, the above mentioned symptoms could be due to its presence. The uterus was of normal weight and size, in proper position, and as far as we could tell, in good condition. The ovaries were not unduly sensitive, and the tubes not enlarged. Failing to discover an intra-pelvic cause for her ill-health, we were forced to look elsewhere, and finally were narrowed down to a morbid state of the nervous system. She was told that her case was perfectly understood; that she was mistaken in supposing herself incurable, and that there was not the least possible doubt that she would get entirely well under the treatment we proposed to adopt. Tonics, digestives and proper diet were prescribed; twice a week we introduced a speculum, and pretended to be doing something, but really did nothing, but commented each time on the very marked improvement. In a week we suggested the propriety of her walking to our office for treatment. She protested her inability, and cited the fact that she had not walked that far for many years. We assured her that she was now better, and fully able to take exercise, and took the position with her, that we expected an honest effort to comply with our instructions. For several days she failed to keep her appointment, but finally our persistency conquered, and she was fairly started on the road to recovery. No other treatment was adopted save tonics, the occasional introduction of the speculum, and large and frequent doses of encouragement. In five or six weeks she was walking all over the city, and was sent back home in the conscious possession of restored health.

Other cases as fully illustrative of this phase of our subject could be cited, but, to our mind, it is conclusive that there is hardly a disease or symptom within the field of gynecology which may not be the subject of nervous mimicry. Candor compels the admission, that not all of the patients to whom the assurance of a speedy recovery was promised were markedly benefitted; but on the other hand, we have seen such a policy or treatment result in good, not only in those who had no local disease, but even where there was

real disease. Good resulted from the relief of mind incident to a favorable prognosis, and we are inclined to think that, in not a few cases, the good resulting from many gynecological operations is to some extent due to the stimulus of hope infused in the minds of patients by the representations of the relief to follow the operation. A case illustrating this point occurred in our practice within the past year.

A young married lady placed herself under our care to be operated on for vesico-rectal fistula. At the same time that this operation was done, we sewed up quite an extensive laceration of the cervix. When the stitches were taken out, the fistula was found not closed; but we were then under the impression that the operation on the cervix was a success and the patient was informed that she would now at least be free from the bad effects of the laceration. A month later, when we operated again for the cure of the fistula, we found the tear in the cervix as bad as ever; in fact, it looked worse. We would have sewed it up again, but for the fact that the patient was convinced that she had derived great benefit from the supposed successful operation, and we were consequently inclined to the belief that the worry of mind was a stronger factor in rendering her an invalid than the rent in the cervix; and a year later we were no little embarrassed when she overwhelmed us with thanks for the great benefit derived from the operation. The recto-vaginal fistula was never cured, and we know of nothing to which to attribute the real improvement in her general health, save the relief of mind brought about by our imposition.

We hope our remarks have not sounded dogmatic and self-opinionated. We have not written in any such spirit, but rather with a full knowledge of the fact that many of our conclusions may be erroneous, and many more overdrawn; and above all, we would not be understood as denying the frequent occurrence of neurotic troubles incident to ovaritis, salpingitis, metritis, cellulitis, displacements, etc.—not depreciating in any way their importance. We would merely add our testimony, founded on clinical observation, honestly interpreted, as proving that many neurotic phenomena, *fac similes* of those associated with recognizable structural ovarian, tubal, uterine and other pelvic diseases may and do often exist independent of any appreciable morbid change in those organs.

The nervous or hysterical element in the reflex phenomena usually attributed to ovaritis, salpingitis, etc., merits more than a passing mention in connection with this subject. We think it will be admitted that it is no easy matter always to say that the manifestations are directly due to ovarian or tubal neuroses, and it is not always easy to decide whether the cause of such manifestations is in the digestive, spinal, cerebral or pelvic system. May we not justly suspect that in exceptional cases some of the good resulting from Battley's and Tait's operations is due to the moral effect of an impression upon a system so susceptible to impressions of all sorts? If patients of the neurotic temperament can honestly imagine that they have a diseased joint and suffer as much; a phantom tumor, so much like a real tumor; if they can simulate pregnancy, even through the stages of labor; if they can mimic blindness, deafness, aphonia, etc.—is it far-fetched to suppose that they may also locate their imaginary disease in the ovary, and manifest symptoms so closely simulating true ovarian disease as to justify operative interference? If instead of giving a guarded prognosis and advising absolute rest, they be told that their cases are curable, that success is the rule, failure the exception, may we not hope by such management to meet with some cases in which success will crown our efforts, without operative interference? And may we not justly claim that some of the good resulting from the use of iodine is due to the moral effect of doing something, and that the pessary in some cases plays a moral as well as mechanical part in the relief of some supposed displacements?

To carry out such a line of practice successfully, no little depends upon the mental characteristics of the attending physician or surgeon, as well as upon that of the patient. If the former has a high regard for the curative powers of some special drug-mode of treatment, or mechanical device, he will infuse some of his enthusiasm into his patient, and effect a cure when a more knowingly skeptical, but skillful man will utterly fail. Nothing is truer than that much depends upon the way and the man by whom the treatment is

*Cases proving this are on record.

adopted. Under the pretext of trying something new, let such a patient's cervix be painted with iodine by the specialist of great reputation, and it accomplishes more good than if done by her regular attendant. Start such a patient from her home to visit the specialist, and she goes off on her mission of health with her mind filled with hope. She is admitted into a private hospital, where she meets with a patient who has been a sufferer for years, now restored by an operation for ruptured perineum; another who had been an outcast from society made happy by the cure of a vesico-vaginal fistula, and the newly admitted patient is stimulated to hope she was mistaken in thinking herself incurable. She has left behind her the anxious condoling friends and relations, who never let her forget the fact that she was the greatest of sufferers, and whose constant wonder was that she could live and endure so much. Change of scenery, associates and physicians gives them something other than themselves to think of. The minds of such patients, disabused of the idea that they are hopelessly diseased, and the first step toward recovery is taken. Impress them with the belief that they are going to get well; educate them to think that they are getting well, and finally that they are well, and many will accept the conclusion and act accordingly. It will do no good to tell these poor sufferers that their disease is imaginary, and that they have no real disease; it is real to them, and they suffer as much and are entitled to as much sympathy, as if they had cancer or some other painful disease. If the patient has been confined to her bed, induce her to think she can sit up, then to take a few steps, the number to be increased each day, and finally to walk and drive out.

Sometimes it may be expedient to make them think they have some other disease, and by so doing shift their attention. The efficacy of cure by a substitution of the supposed malady is not new; its correct conception flashed from the brain of the immortal poet when he wrote,—

“Tut, man, our fire burns out another's burning;
Turn giddy and be helped by backward turning;
Take some new infection to thine eye;
And the rank poison of the old will die.”

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ART. II.—History of Fourteen Cases of Abdominal Section, with Remarks upon Ovariectomy and the Methods of British Operators.* By JOS. TABER JOHNSON, M. D., of Washington, D. C.

Mr. President and Gentlemen :

So much has been written lately upon the subject of ovariectomy, that it is prophesied by very high authority that an apology will soon be expected from any one introducing this subject to an intelligent audience of medical men. Thus Mr. Lawson Tait says† in his recent report of 139 consecutive ovariectomies, without a death, performed between January 1st, 1884, and December 31st, 1885, that, “from our recent experience in ovariectomy, it would almost appear as if the time had arrived when we had the last word to say about it, and had now merely to refer to it occasionally in valedictory or inaugural addresses as one of the marvels of the nineteenth century.”

But this subject is not a “closed chapter” to the majority of operators. While a few of the great experts of the world have reduced their mortality to 8 per cent., and 5 per cent., and 3 per cent., and Mr. Tait’s last report of 139 consecutive cases shows no mortality whatever, many of us have some very important lessons yet to learn before we can make equally favorable reports. The great apostle of ovariectomy nine years ago was doing this operation in London with a mortality of 23 per cent., but he recently reports in his book,‡ that he had reduced that mortality to less than 10 per cent.

The gradual reduction of the death rate of this operation has resulted from a combination of causes familiar to every student of abdominal surgery. That an impulse was given to laparotomy by the adoption of some of the modified forms of Listerism is an accepted fact. That the proportion of recoveries has been greater since the clamp has been abandoned, and the ligature and the intra-abdominal treatment of the pedicle substituted in its place, all will admit. Those who do not practice antiseptic surgery apply the principle

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†*British Medical Journal*, May 15th, 1886.

‡*Diagnosis and Surgical Treatment of Abdominal Tumors*.

of "perfect cleanliness," and "disease germs" are thus shut out of the abdominal cavity just as certainly as if their operations were conducted under clouds of spray. Or, to state it another way, Mr. Tait and Dr. Keith, who discard Listerism, get the best of results; but any one watching their operations must be impressed by the fact that they are very clean surgeons, and that none but the cleanest of knives, forceps, sponges and fingers are allowed in the abdominal cavity, and as few of them as possible.

A student of abdominal surgery is impressed with the variable results of operations within the abdominal cavity, reported by different operators, who, one would anticipate, would have about the same results. Every detail in the technique of these operations has been published, and they have been so much discussed in journals and societies that, as I stated in the beginning, the subject is regarded by a distinguished operator as a closed chapter, and yet these disparities exist. And one of the objects of this paper is to endeavor to answer the oft-repeated question as to why operators who obtain the best results achieve those results. Probably the shortest answer would be, so far as my humble opinion is concerned, that those operators who have the least mortality are the best operators. I should answer this question in this way in regard to individual surgeons as well as in regard to nations. I do not believe the bulk of British surgeons to be any better than the bulk of American surgeons. Indeed, I feel perfectly certain that, with the experience gained by our surgeons in the late war, that in dexterity of operating, fruitfulness of expedients, readiness for emergencies, and in proving equal to them when they arise, American surgeons lead the world.

It is generally believed however, that one's skill and manipulative dexterity increases with his experience; that one can do his second dozen ovariectomies better than he did his first dozen; and when it comes to abdominal sections by the hundred, statistics prove that a greater success follows as experience in all the great number of details (which go to make up success) increases. This is shown at a glance by the tables presented by Sir Spencer Wells in reporting his

1,000 cases of ovariectomy; although it is, of course, admitted that improvements have occurred which have aided much in reducing mortality. In Sir Spencer Wells'

First	100 cases, 66 recovered and 34 died.
Second	" 72 " " 28 "
Third	" 77 " " 23 "
Fourth	" 78 " " 22 "
Fifth	" 80 " " 20 "
Sixth	" 71 " " 29 "
Seventh	" 76 " " 24 "
Eighth	" 76 " " 24 "
Ninth	" 83 " " 17 "
Tenth	" 89 " " 11 "

giving a general mortality in the 1,000 cases of 23.2 per cent.—this being thirty-four deaths in the first 100 operations, and but eleven in the tenth hundred. With the exception of the sixth series of hundred cases, the mortality lessened with each report.

The point I am demonstrating is perhaps more clearly shown by another of Sir Spencer's tables on the same page of his recent book, viz.: By dividing the twenty years in which these 1,000 operations were performed into four periods of five years each, it is shown that in the first five years about one in three died; in the second and third five years about one in four died; in the fourth five years about one in five died; last two years about one in ten died.

In speaking of the watchful care of his patients, during and after operations, which he considered necessary to protect them from infection, he says:

"I contended that obstetrics and operative surgery should seldom be permitted in the same building, or by the same surgeon in private practice; and that such an operation as ovariectomy should never be performed where patients with uterine cancer, or offensive discharges of any kind may pollute the place. In 1875, a separate branch of the Samaritan Hospital was opened, and since that year the surgical wards have been much freer from such sources of danger. The good effects of this change were noted before other antiseptic measures were insisted on, and to such an extent that the death-rate, after my operations, was reduced one-half."

In speaking again on this point, on page 61, he says, "So that twenty years' experience may fairly be said to have re-

duced the mortality of the operations upon my uncontaminated patients to 3.6 per cent."

And again, as showing how the success of this operation was marred by infection, he says: "Among my 81 private cases during the same time (1876-77), 5 deaths were more or less directly connected with the operation, and 17 were from communicated septicæmia."

I must add another quotation as a part of my explanation of Sir Spencer Wells' success in bringing down his mortality from 34 per cent. with his first hundred cases, to 11 per cent. in his tenth hundred, and in 247 operations later on, to 10.9 per cent.; he says, on page 63:

"And this, too, as an additional security to my patients. I have never made a post-mortem examination; have been free from all but the most casual contact with hospital influences; have never carried about with me the infections picked up in general practice, and having had fewer persons present at my operations, have eliminated a great part of an incalculable source of danger."

Dr. Thomas Keith reported, on December 17th, 1884, that he had, up to that time, performed 490 ovariectomies, with a death-rate of 9.11 per cent. His mortality has since been reduced to 3 per cent.

If asked, how do I account for his wonderful success? I should answer briefly, because he is a wonderful operator. If asked again, how I account for his being such a wonderful operator? I should say, in regard to him as was said of the man who had the neatest necktie in his city, that he put his entire mind upon it. Keith devotes all his surgical powers and resources to abdominal surgery. He does nothing else, and consequently comes in contact with few of the infectious influences which the general surgeon meets with in his operations upon infected patients. Of his methods and practice I shall have more to say further on.

Pean, in October, 1881, reported 306 ovariectomies with 61 deaths. But Wells remarks of Pean, that "it has been the same with him as with most other surgeons—that his latest work was his best; for out of the last 100 ovariectomies there had been only fourteen bad results."

Schröder, on November 30th, 1884, wrote Mr. Wells that

he had up to that date performed 514 ovariectomies. He lost 17 cases out of his first 100; but as his experience increased, he lost only 7 out of his fifth 100.

So with Professor Nussbaum, of Munich. Up to November, 1884, he had performed a total of 415 ovariectomies. Out of his first 100 operations, 37 patients died, but as his skill increased he was able to do the last 115 operations with only 10 deaths.

So also with Professor Olshausen, of Halle, who, writing on December 26th, 1884, says that he has performed 270 ovariectomies. Of the first 170 twenty-four died; of the last 100 only four died.

Professor Billroth, the great general surgeon of Vienna, Mr. Wells states in his recent book (before referred to, page 65) that up to the end of December, 1884, he had done 327 ovariectomies, with a total mortality of 31.5 per cent. Billroth says in this communication that, "My opinion is as follows: Granted that the operation is well done, and that the patient does not die within about twenty-four hours from loss of blood or shock (which has occurred to me only four times in 224 cases), the result depends upon whether sponges, fingers, instruments, secretions, and above all, the ligature threads are clean. If this be so, all get well." This seems to be almost an admission from this great surgeon, who is doing so many wonderful cancer operations, and other masterly feats in general surgery, that he has neglected the very precautions which he declares and which all ovariectomists everywhere admit, are essential to success, as his mortality is higher than that of almost any other celebrated surgeon.

The first 100 ovariectomies done in Italy resulted in the death of sixty-three patients, but in the fifth 100, completed in June, 1884, there were only twenty-three deaths. I have the authority of Mr. Tait for the statement that the sixty-three deaths in the 100 ovariectomies referred to, was the work of forty different operators, giving an average of two-and-one-half cases to each surgeon. His comment was that Peruzzi should have stated this mortality *as the mortality of the operators*, and not of the operation, and that no better results could be expected where so many inexperienced men

were performing capital operations, which should have been sent to experts in abdominal surgery, who, with their greater skill, gained from constant experience, could have saved over 90 per cent. instead of unnecessarily losing 63 per cent.

Goodell, in his article on ovarian tumors, says* upon this subject: "In no other operation does the issue depend so largely upon the experience of the surgeon. Every ovari-otomist finds that his success grows with the number of his cases;" and cites the early practice of some of the most successful men of to-day in proof of this assertion. Thus, Lawson Tait, whose mortality is now stated at only three per cent, and who recently had a run of 139 cases without a single death, lost *nineteen* patients out of his first fifty operations. Keith, who began with a mortality of about twenty per cent., has lately had a series of 100 cases with 97 recoveries. Goodell, who at first lost about one in every three cases operated on, states, in his last twenty-two cases, there was but one death, and that occurred in a lady operated on at her home too distant for him to see her again.

I will not fatigue the Society with further statistics in support of my suggestion—that the operators who are getting the best results in abdominal surgery are the best operators. I have endeavored to show that the best results reported have been achieved only after long and bitter and bloody experience, and that by the strictest attention to a number of details, minute though many of them may be, yet they are necessary to success.

Some one has well stated that success in ovariectomy is made up of attention to many little things, the neglect of any one of which may prove fatal. Ovariectomy in Great Britain is largely in the hands of four men, who are doing nearly all this work—viz., Thornton and Bantock, at the Samaritan Hospital, in London, Tait, in the centre of England, at Birmingham, and Keith, at Edinboro. Sir Spencer Wells resigned from the Samaritan Hospital in 1878, after twenty years' service, is now over 70 years of age, and is doing comparatively few operations. British physicians and surgeons recognize the fact that these four men, and a very

* Pepper's *System of Medicine*, page 314, Vol. IV.

few others, have been so educated up to the work that they can do better than beginners, and therefore send them the great majority of the cases, and this still further educates and improves them.

More explicit faith seems to be placed in the dictum of the surgeon abroad than in our country, and operations are done early while the patient is still strong, and before the tumors have been tapped, or greatly interfere with surrounding organs, or acquire adhesions. In some instances perhaps the constitutions of the women are stronger, and in them the shock of the operation may be less, and convalescence more sure and rapid. But I doubt if these points have very much influence. The fact that these four men do little else but abdominal and pelvic surgery, and thereby escape contact with so many contaminating influences and infections; that they are prepared and equipped with all the improvements that surgical science has produced, and that their *armamentarium chirurgicum* is kept surgically clean, and in constant working order, and so frequently used—that they have a trained corps of assistants and nurses who are scarcely less able than themselves, have very much to do with their success.

The remarks I have made in reference to abdominal sections being done by general surgeons I apply to myself just as forcibly as to them. Though I do no surgery except that which comes within the limited field of gynæcology, still I see a great many obstetrical cases of my own, and in consultation with other physicians, and a few cases in general practice; and I have done most of my abdominal sections in private rooms in a large hospital; still I think that if I could devote my entire time, or if our operators could, to abdominal surgery, our results would be better. One of my fatal cases had facial erysipelas, and one died of vomiting, perhaps from sepsis. Of my fourteen abdominal sections, twelve were done in general hospitals, and of the twelve, two died. Of two sections for good-sized ovarian tumors done in private houses, one died.

In illustration of this suggestion, that one's skill and success should increase with his experience, I will state that out

of the first five cases I operated on, three died, and out of the last nine, none died. I am sure that my experience, gained in assisting and witnessing about seventy ovariectomies, enabled me to save one or two of my cases, which I might otherwise have lost.

In June last, I went to Europe for the purpose of studying abdominal surgery, and to discover, if possible, why it was that better results were obtained by European laparotomists than were reported in this country. I met a number of distinguished American gynecologists and physicians, and in discussing this subject with them I found that opinion differed widely as to the cause. Some attributed it to climate; some to the stronger constitutions of the women; some to the fact that operations were done earlier, as a rule, than in our country; and one or two said boldly that they believed the best results were obtained by the best operators. I have already stated my own opinion. It is quite possible that all of these causes combined to produce the wonderfully low mortality reported.

The first abdominal section I saw performed in England was by Dr. George Granville Bantock, in the Samaritan Hospital, on the 30th of June, 1886, for the removal of the uterine appendages for the relief of a rapidly growing and bleeding uterine myoma. After their removal, the Doctor determined to remove the myoma also. He applied Kœberle's *serre-nœud* around its base, passed two long pins just above the constricting wire, and then cut off the tumor, which was about the size of my fist. The wound was closed with silk sutures—about three to the inch. Great care was used to draw up the peritoneum about the pedicle, and to thus completely close the abdominal cavity. Simple dry dressings were applied; long adhesive straps to sustain the abdominal walls; no antiseptics of any kind, but the greatest attention was given to cleanliness. I saw Dr. Bantock operate on an ovarian tumor with a twisted pedicle, do four ovariectomies, and one where the abdomen had been previously opened, for the removal of an ovarian tumor on the other side. In this case the attachments were numerous, and the colloid contents of the tumor got into the peritoneal

cavity. After tying all bleeding points with the greatest care, he deliberately poured several gallons of hot water into the abdomen from a pitcher, and thoroughly washed it out, and then put in a drainage tube, the top of which penetrated a large piece of fine rubber cloth. A cup-shaped sponge was put over the mouth of the tube to absorb the discharge, and the rubber was folded many times over the sponge. The main dressing being under the rubber cloth, it was not disturbed or soiled by any fluid escaping from the tube. In ordinary cases the rule was to pump out the tube and pelvic cavity every three hours, and in bad cases every two hours, and to keep this up until the quantity drawn out was less than half an ounce. I saw Thornton and Meredith use this same device in the same hospital.

Dr. Bantock is a gentleman apparently about 50 years of age, with full, long beard, inclined to be grey, about six feet tall, and would weigh about 180 pounds. He operates with the greatest coolness and deliberation; and neither he nor the other surgeons of the Samaritan seemed to make any effort to operate against time. Thus the operation above referred to occupied fifty-seven minutes by the watch, and I saw Meredith do one immediately afterwards which took one hour and fifty-five minutes.

Meredith is about 40 years of age, tall, thin, and wears a close-cut, full beard. His case was a small tumor growing in between the folds of the broad ligament, but giving the patient a great deal of pain. It had no anterior attachments, and appeared like a simple cyst until after it was tapped. Posteriorly it was adherent to everything, and its enucleation required more than an hour. When it was finally freed from all attachments and removed, there must have been as many as twenty forceps dangling from as many bleeding points. These were all carefully tied off, and the omentum, intestines and broad ligaments searched, sponged, and carefully handled to find any other bleeding surfaces. A straight glass drainage tube was put in and dressed, as above described. This patient made a good recovery, I was afterwards informed. The operation was done in a warm room, on the 30th of June, in a dense cloud of carbolic spray,

which was very oppressive to operator, assistants and invited guests.

On July 3d, I saw Mr. J. Knowsley Thornton operate for removal of an ovarian tumor with a twisted pedicle. Patient had symptoms of peritonitis. Mr. Thornton made a long incision, exposed a dark and almost gangrenous tumor. Considerable blood had been effused, and a number of large dark clots were turned out. Recent adhesions were very numerous, and though easily broken down, bled freely. The pedicle was quickly reached, and found twisted several times upon itself, and the tumor completely strangulated. Strong pressure-forceps were at once applied to the pedicle, and the tumor cut away. The pelvic cavity was packed with large soft sponges wrung out of carbolized hot water, and the omentum and intestines, which had been adherent to the tumor, were drawn out and placed upon and between hot, wet towels, and nearly an hour was occupied in sponging, searching, finding and ligating bleeding points. When all oozing had been thus controlled, the parts were carefully replaced, the sponges removed, and another search made for bleeding points. When satisfied, the abdominal wall was closed by a great many silk sutures, and a drainage tube put in, and dressed with all the neatness and care above described. I saw this patient a week later with Mr. Thornton, and she had every prospect of complete recovery. I saw Mr. Thornton do six ovariectomies in all. He is a man of about 40 years of age, has a high, full forehead, and wears a large moustache. He is never disconcerted by what happens in an operation, except at the stupidity of his assistant or nurses, when he swears. He has now done about 700 abdominal sections, with a mortality of less than 10 per cent.

The surgeons of this hospital differ as to the use of antiseptics—Thornton and Meredith operating in dense clouds of carbolic spray, while Bantock uses nothing but hot water and perfect cleanliness. Thornton and Bantock get about the same results.

So much has been published in the journals of late, in regard to Mr. Tait, and his peculiar methods of operating, that I will not extend this paper by a description of his

methods. Having made the acquaintance of Mr. Tait and his wife when they were in Washington, in 1885, I did not feel that I was altogether a stranger in Birmingham when I arrived, in response to a kind invitation from the great abdominal surgeon, on the 6th of July. To speak of Mr. Tait as cordial and hospitable, hardly expresses it. He said one day, when I declined an invitation to dinner, that *he* was not allowed to dine alone at a hotel while he was in *my* country, and he would not permit *me* to do so in *his* country. I remained in Birmingham, witnessing his marvelous skill in abdominal surgery for about three weeks, and saw him perform during that time at least twenty-five operations. I have repeatedly seen him remove the uterine appendages in less than ten minutes, and do a number of ovariectomies in thirteen and fifteen minutes. I had the pleasure, also, to see him operate in a case of extra-uterine pregnancy, and do his operations for the removal of gall-stones, for vesico-vaginal fistula, and for restoration of the perineum several times. His manipulative dexterity is simply wonderful. He rarely occupies ten minutes in restoring the perineum, even when it is torn through the sphincter and up the septum. The vesico-vaginal fistula operation, above referred to, was finished in just thirteen minutes, and it was literally done without speculum or needle-holder. But the powers of diagnosis and manipulative skill and dexterity which reside in his "finger-tips" are nowhere so startlingly shown as in his operation for the removal of the uterine appendages. His mode of opening the abdomen differs from that of any other operator I have seen. When the peritoneum is opened, he thrusts into the small opening his two fingers, tearing it larger, and diagnoses and liberates adhesions, and turns out the ovaries and tubes in less time than it takes to properly describe the process, and yet there is no appearance of roughness or rash haste. I heard one physician speak of him affectionately as "old finger-tips."

Mr. Tait is comparatively a young man, being just past 41, and he probably stands to-day as the boldest and most original and most successful abdominal surgeon in the world. An entire paper devoted to Mr. Tait and his work could not

do the subject justice, and I will not attempt so delicate a task as a description of him or his methods. His manner was said to be brusque by some, and so peculiar as to be offensive to others; but I shall never cease to be grateful for his many acts of personal kindness and lavish hospitality to me while in his city. He said to me, at one of his dinners, that he had so many Americans to visit him that his friends called his house the Stars and Stripes Hotel. Mr. Tait generally selects an early hour in the morning for his serious operations. I had a number of times to be called at six, breakfast at seven, and ride three miles to the Woman's Hospital, at Spark Hill, to see him operate at 8 o'clock. He does not seem much fatigued by his operations. I frequently saw him do two laparotomies, one immediately after the other; and the last day of my stay I saw him do five operations before breakfast, and at 2 P. M. another on a patient who had been admitted that morning into his private hospital, which adjoins his residence. He begins work at 8 A. M., and breakfasts at 11. In answer to a question by Dr. Howard, of Baltimore, as to how many ovariectomies he had ever performed in one day, he replied that, in order to test his strength, he had one day performed six, but he did not care to repeat it. Mr. Tait has opened the abdomen over 1,600 times.

I had the pleasure of seeing Dr. Thomas Savage, of Birmingham, operate several times for the removal of the uterine appendages, and also for the removal of a kidney. His methods are about the same as those of his colleague, Mr. Tait. He told me, at a dinner at his house, that he had done this operation over 400 times. He, like Tait, uses no antiseptics, and seems to have no fear of opening the peritoneum. His death rate is very small—less than 5 per cent. I think.

After corresponding with Dr. Thomas Keith, with reference to a hysterectomy for a large fibroid, it was finally arranged that Drs. Emmet, of New York, Howard, of Baltimore, Maury, of Tennessee, and myself, should meet in Edinboro, on the 12th of July, to witness the removal of a uterine fibroid, estimated to weigh at least forty pounds.

The patient had been under observation for several years, and the tumor had been growing for fifteen years. The patient was etherized with the Clover inhaler, in less than five minutes, and we assembled about the operating table to see the fibroid removed by the great hysterectomist.

The abdomen was exposed, and Dr. Keith made an incision more than a foot long directly through the umbilicus, and exposed the tumor in several places with the first stroke of his knife. We were all as much surprised as Keith to find that our fibroid was a cyst of the broad ligament. It turned out to be adherent in many places, and required nearly an hour for its complete enucleation and removal.

Dr. Emmet remarked that it was worth a trip from London to Edinboro to see Dr. Keith make such a mistake in diagnosis. Dr. Keith replied that it was his seventh error in diagnosis in over 600 abdominal sections.

Keith is one of the most sincere and honest operators in the world. I heard many doubts expressed in regard to the reports of various operators abroad, but nearly every one I heard mention Keith's name declared that the most perfect reliance could be placed upon any and every statement he made. He is fifty-seven years of age, in very feeble health from kidney disease, and does not expect to live over a year longer.

He is slow but sure in his operations. After reaching the pedicle of a tumor he applies strong lock forceps to it, and cuts it away, and then spends much time, or as much as is necessary, in hunting for bleeding points, and in securely ligating them with fine silk. In separating the adhesions in this case, he had forty-seven forceps applied to detached and bleeding parts, which he had separated with his fingers from the tumor. He subsequently tied each one with fine silk, which he had rolled on a glass spool and drew out of a bottle filled with a weak solution of carbolic acid, and cut off the ligatures as he needed them. His fingers are long and slender, and as he makes them fly about in the abdominal cavity, severing adhesions, he reminded one of a pianist fingering the keys of a piano.

His son, Dr. Skene Keith, assists him at his operations,

and has done so for several years. Henry Keith also had an experience as assistant in the Samaritan Hospital under Bantock and Thornton. I saw him do an operation on July 13th, which was of the same kind his father operated on the day before. The operation was completed in one hour and fifteen minutes. Skene Keith bids fair to be one of the best operators of the coming age. He told me that he had already done eighty-one ovariectomies with but two deaths and twenty-four Tait operations without a death. It is true he had his father to advise and assist him, but it is nevertheless true that he did the operations. He is but 27 years old.

The elder Keith has now done about seventy hysterectomies for large fibroid tumors, with but seven deaths—the best results which have ever been attained by any operator so far as I know. His first thirty-eight cases were done with only two deaths. I was very anxious to see him do this operation, but the case I went to see unfortunately turned out to be one of mistaken diagnosis. I may add that the two cases I saw by the two Keiths recovered.

Did time permit I should be glad to say much more of this remarkable man and his remarkable son, and their kindly hospitality, but I fear I have already taxed your patience beyond endurance; and thanking you, Mr. President and Mr. Secretary, for your very kind and flattering invitation to attend this meeting, and to read a paper, I will close this desultory and disjointed production, simply calling attention to some notes of cases which have been operated on by myself.

CASE I.—Miss N., from Pennsylvania, referred to me by Dr. J. R. Riley, of D. C., was a fearful sufferer from chronic ovaritis and menstrual epilepsy. She was 29 years of age. Her menses appeared earlier than in the average girl, but, for several months prior to their eruption, convulsions of a severe and prolonged character always occurred. When I saw her she had been a victim of these monthly recurring spasms for a period of fourteen years. She had never been trusted to attend school; had grown up without education, and presented the appearance of besotted ignorance. She had constant pain in both ovaries, but for several years her sufferings had been limited to the left side. She was not

only unable to perform any kind of useful or remunerative labor, but for two weeks out of every month, or just half of her time, she was constantly under the care of an attendant. She had been treated by many physicians of all known, and many unknown schools, and had been the subject of much experimentation by old women, cranks and quacks. She had never received permanent benefit from any kind of treatment, and was constantly growing worse. The ovarian pain in the inter-menstrual periods was greatly aggravated by exercise or housework. When I saw her she was a pitiable and revolting spectacle. Her face, with its numerous scars and bruises, the effects of falls during her spasms, associated with a total lack of refinement or culture, gave her an almost beastly look.

After learning her history, I soon decided that, as everything likely to be of service had already been done over and over again, if a premature change of life could be induced, upon Battey's theory, by Battey's operation, I would attempt it. Consent having finally been granted, and the relatives subsequently being clamorous for the operation, as offering the only hope for recovery, I performed it on the 17th of August, 1882, removing both ovaries and one Fallopian tube.

The patient's excellent recovery was only retarded by one or two stitch-hole abscesses, and a slight attack of bronchitis. For several months she had no periods and no spasms, and was greatly improved in her general health and appearance. Gradually her menses returned, and with them convulsions of a mild form, so that now, five years since her operation, she is menstruating with greater regularity than ever, but with less frequent and much less severe attacks than formerly. Her sister informed me, a year after the operation, that it was the family belief that she had been so long accustomed to having these "spells," that they had become a habit with her, and that she only had them when excited or angry; and it was the general opinion that they were purely hysterical, and that she could control them if she desired.

Her physician wrote me on the 23d of July last: "My opinion is that the operation was a great relief, and has certainly prolonged her life." The patient and her friends frequently declared to me their pleasure and satisfaction with the results of the operation.

CASE II.—Miss W., aged 21, formerly in good circumstances. Her parents both became addicted to strong drink, squandered their property, broke up their home, and finally separated. Miss W. was taken in charge by poor relatives,

and was compelled to earn what she could by sewing. Overwork, insufficient nourishment, and mental anxiety soon destroyed her health and spirits. She took a severe cold at the time of a monthly period about seven years ago. The period was suppressed, and she was "confined to bed for several weeks with pain and fever." Since this time she has been a great sufferer from chronic ovaritis and dysmenorrhœa; had been constantly treated, without benefit, and was steadily growing worse. Her only relief was in bed, with hot applications and anodynes, during the week of her menses. She had leucorrhœa and a displaced uterus, which were constantly treated with varying success, but without helping the ovarian pain.

I saw her at the request of Dr. H. E. Leach, and treated her three months, but she grew worse all the time, and finally entered my service at the Providence Hospital, where, after another month spent in preparatory treatment, with oöphorectomy in view, I removed the ovaries and tubes. She made a perfect recovery; was sitting up in two weeks, and in less than a month, left the hospital a new creature—no pains, no menses—happy in mind and well in body.

In a letter received from her about two years after leaving the hospital, she used the following words: "No pen can write the sufferings I endured in the five years previous to my operation. At times I became almost desperate enough to take my life, and end my sufferings. * * * * My life now seems a new one, and I am getting along splendidly.

* * * I am now a well, happy and cheerful girl, and do not feel like the same person at all." She closes by recommending oöphorectomy "to anybody suffering as she did," and reasserts that "it has been a sure cure to her."

CASE III.—Miss S., aged 24, a young lady of agreeable looks and refined manners, evidently from a family of education and former wealth, was sent to me by Dr. Mary Parsons. She had been, for some years, a great sufferer from dysmenorrhœa and reflex disturbances in the stomach and nervous system. Ovarian pain, vomiting, backache and headache, and insomnia, were more or less constant.

I quote from the Garfield Hospital report, where she was for several weeks my private patient: "She was brought up in the midst of excitement, and her nervous system was constantly strained to its utmost. She was healthy until the age of fourteen, when her menses began. At once a change came over her. She began to lose health and strength. Each period was preceded by about ten days of violent pain

in the abdomen and head, accompanied with nausea and vomiting."

For the last seven years she has been under the care of numerous doctors, at home and in hospitals, without relief. At present, and for many months, she states that, while the menstrual molimen had been regular, there is no flow. The period is accompanied by all her former distressing symptoms, but the discharge has been growing less and less, until now it amounts to a few stains upon a napkin.

She became my patient subsequently in Providence Hospital, through the kindness of Dr. J. R. Bromwell. After four months of fruitless effort, I declined to spend further time upon her unless she submitted to oöphorectomy. She had several times exhibited decided evidence of insanity, and her relatives desired the operation, as much to preserve the soundness of her mind as her body. Accordingly, on the 15th of February, 1884, I removed both ovaries and tubes.

Her convalescence was somewhat retarded by the formation of abscesses, but she made an excellent recovery, and continues to this day to be a marvel to herself and friends. The ovarian pains and reflex symptoms have disappeared, and she returned to her clerkship in one of the Government Departments, where she performs her duties to the entire satisfaction of her superiors. She writes me as follows, in a letter just received:

"I suffered for years almost constantly with severe throbbing pain in my side and back, greatly aggravated by exercise, and at times accompanied with intense nausea, entire loss of appetite, sleeplessness, and a nervousness which cannot be described, which would often continue for ten days, only to be alleviated by large doses of morphine. I was in Hospital No. 4, with Doctor No. 28, confined to my bed for four months; and more or less for two years, growing rapidly worse, and my suffering so great that I felt I could endure them no longer. When I resigned myself to the operation, I believed and hoped that it would end my life. I am now relieved of the old pains, and am better in every way than I have been for ten years, * * * and I cannot express what I feel for my noble, untiring, and skillful physician. I feel that I owe more than my life to him, for I fear I would have been insane with the suffering; there was no respite from it until I fell into his kind hands."

CASE IV.—Mrs. X., aged forty, mother of three children, had suffered a constant burning pain in the left ovary for

twenty years, and for the past few years in the right ovary also. She had, in addition, a lacerated cervix and perineum, both of which had been restored by operations. She had been under treatment for many years, and had spent, she said, over \$10,000 to obtain relief from this constant gnawing, burning pain, without success. She was practically bed-ridden three weeks out of every month, and had little if any enjoyment in life. Her pains all culminated about the time of her period. Constant nausea and neuralgia—both reflex—made her life a burden which she refused longer to bear.

A lady friend, in about her condition, had been operated on and cured, and she calmly and deliberately made up her mind to have her offending organs removed. I demurred, and begged her to stand it five years longer, until nature would come to her rescue in the change of life. She replied that she had stood it just as long as she could, and that, unless she obtained relief, she would be in the grave or an insane asylum in less than a year. Finally, after she had told me that she had arranged to be operated on in New York in a week, unless I operated within that time, upon the advice, and with the consent of her husband, I removed the ovaries and tubes, in a private room in the Providence Hospital, on the 16th of February, 1884—the day after the operation on Case III. She rallied perfectly, and with the exception of vomiting, seemed to do well for three days; but the vomiting could not be controlled, and she died exhausted on the morning of the sixth day.

The autopsy gave little evidence of the cause of death. Her constant retching and vomiting had set up some slight peritonitis about the sutures. One small sponge readily absorbed all the fluid in the abdominal cavity, which was inodorous. An abscess about the size of a chestnut was found in the abdominal wall, in the track of one of the stitches.

CASE V.—A lady, the wife of a prominent government official, aged 30, married nine years, and without children, was a great mental and physical sufferer at the time of her periods. She was compelled to remain in her room, and most of the time in bed, from seven to ten days out of every month. Her ovaries were enlarged, very tender, and gave her the most excruciating pains when she overstepped the narrow boundaries which she had found, by many sad and distressing experiences, hemmed her in on all sides. One ovary was badly adherent, and the other, about the size of a hen's egg, was quite movable.

This was one of the most anxious women to have children I ever met. She has, however, never been pregnant. She had been, more or less, under treatment for ten years, and everything seemed to have been done, and well done, to overcome her dysmenorrhœa, and cure her sterility, which gynecologists could do or invent; but, with the exception of some relief to her monthly pains, gained as much by experience, in taking better care of herself, as by treatment, she was worse off—taking the case as a whole—than she was five years ago, with no prospect of ever being better, until the change of life would inaugurate those changes and bring that mysterious quiet to the sexual apparatus of the female, which we are powerless to hasten by treatment, or to fully understand.

The sad termination of my last case caused me to hesitate before subjecting this charming lady to the dangers of Battey's or Tait's operation, and yet I was fully convinced that it was the only thing left to do. She repeatedly begged for any operation which held out the least prospect for her to have a child of her own. Her maternal instinct was so strong as to lead her to court any suffering which might bring this glad fruition to hopes so long deferred. When told that she was hopelessly sterile, and that Tait's operation would make it forever impossible for her to conceive, she wanted to die. Her most absorbing hope was taken out of life, and she had no further interest in living. She was desirous, to quote her own words, to be "killed or cured" of her pain. If she could live on and do her duty in her home and to society, free from pain, she would be willing; but, while anxious, for the sake of her friends, to get well and strong once more, I felt assured that her ardent hope was that she might perish in the attempt. Her husband and intimate friends feared that she would, in some attack of pain and mental despondency, end her own life by some rash act, or do some other dreadful deed.

I now think the operation should have been performed years ago. Our means of diagnosis in these sad cases need improving. Of course we hesitate, as in duty bound, to subject these patients to the risk of abdominal section until all other means have been exhausted and have failed to relieve.

Upon the advice of Dr. N. S. Lincoln, of Washington, I operated on the 20th of January, 1885. The right ovary and tube came out without much trouble. The left was imbedded in such a mass of inflammatory products as to make

its removal practically impossible. After working at it about fifteen minutes, I reluctantly gave it up, sponged out the abdominal cavity and closed the wound. The patient made a slow recovery, and has not been much benefitted by the operation, though she wrote me a letter this month from Buffalo, her present home, full of appreciation and gratitude for my efforts, and saying that she was doing much more than formerly, and had gained considerable flesh and strength. I doubt if she will ever be well until that other ovary is removed, or her change of life puts an end to its functional activity. She is about 30 years of age.

CASE VI.—Mrs. W., aged 35, white, married, the mother of one child eight years old, was brought to my office in June, 1884, by Dr. Walter, who gave me the following history of the case: In November, 1884, she noticed an enlargement in her right side, and discussed with her mother the probabilities of pregnancy. She had too frequent and profuse menses, however, and the belief gradually grew upon her that the growth in her abdomen was a tumor. Her health continued very good. She suffered no inconvenience from its growth, except from its weight and size. There was a noticeable interference with the functions of the bladder and rectum, but no more than had occurred during her pregnancy eight years ago. In April or May she consulted Dr. Walter, who, under the suggestion that she might be pregnant, declined to use the sound; and as her health was not suffering, he advised that only symptoms should be treated, and that time would prove whether she was with child or not.

Dr. Walter brought her to my office on the 27th of June, when I diagnosticated an ovarian tumor, with fluid so thick that fluctuation was difficult or impossible to detect, and suggested operation at once, or as soon as the hot weather should be passed. This was readily agreed to, and the first week in October appointed for the removal of the tumor. I made several examinations in the meantime, and believed the tumor to be cystic from its general feel, but could never get any fluctuation. I suggested that the fluid might be colloid in its etymological sense. I had no thought of malignancy—the patient being robust, of good color, good appetite, and feeling perfectly well. She had not lost flesh, and had no cachexia.

During the meeting of the American Gynæcological Society, I requested one of its distinguished members, who has performed and witnessed hundreds of abdominal sections,

to examine Mrs. W. with me. He kindly did so, and expressed a very positive opinion that the tumor was a solid fibroid; and, as it was rapidly growing, that the proper operation was the removal of the uterine appendages, with the hope that the tumor would stop growing and would soon disappear.

This change of plan was explained to the patient and her husband, and October 7th fixed for the operation. The lady was admitted to a private room in Providence Hospital on the 5th, and the abdomen was opened on the morning of the 7th, in the presence of Drs. Bromwell, Walter, Cutts, and the resident physician, Dr. Hickling. Instead of a solid fibroid, I found a tense cyst, which was free from adhesions as far as could be ascertained with the finger, or a large male sound, passed freely in all directions over the anterior surface of the tumor. The tumor was tapped, and about eight pounds of clear amber-colored fluid withdrawn. Traction was made on the cyst, but it would not come. Upon passing in my hand after enlarging the opening from the umbilicus to the pubes, it became apparent that the tumor was attached posteriorly over its entire surface. The separation of these very numerous and powerful adhesions occupied more than one hour. They were so strong that it required nearly my entire strength to break them and lift the tumor out of its bed, and to turn it out of the abdomen. The difficulty seemed so great, that at one time I thought of enlarging the opening in the sac, putting in a drainage tube and stitching its edges to the abdominal incision; with further efforts, however, I was able to turn out the entire tumor. It was then found that the attachments to the uterus were so intimate that they could not be separated without producing great hæmorrhages, and the removal of the uterus was finally determined upon. A clamp was applied at the internal os, and the uterus and tumor cut away with the thermo-cautery. The stump was secured in the lower angle of the wound, and the incision in the abdominal wall closed with eight silk sutures; after clearing out the abdominal and pelvic cavities, a drainage tube was put in above the pedicle. The usual dressing was applied, and the patient put to bed, having been on the table two hours and twenty minutes. I feared the lady would not live twenty-four hours, and so informed her husband. She, however, had a good night, and continued to do well. Her highest pulse was 108, and temperature 101°, and that only for one day. Her pulse did not rise above 80 afterwards, nor her temperature

more than one degree above normal. The drainage tube permitted the removal of an ounce of bloody serum the first day or two. The quantity grew less and less, until on the seventh day none could be drawn up, and it was removed. The pedicle and clamp came away on the fourteenth day. She continued well for six months, when the cancer returned in the portion of the cervix left, after the supra-vaginal hysterectomy, and she died from its effects eight months and twenty-one days from the removal of her tumor.

From the appearance of the cyst and its contents, I feared that there was a colloid degeneration of the tumor, and therefore took it to the Army Medical Museum for examination. The following is the report of the microscopist of the Army Medical Museum:

“WAR DEPARTMENT, SURGEON GENERAL’S OFFICE,
ARMY MEDICAL MUSEUM,
WASHINGTON, D. C., October 27th, 1885.

J. TABER JOHNSON, M. D.:

Dear Sir,—The abdominal tumor sent here for examination proves to be a cystic adeno-carcinoma of the ovary. The diameter of the cysts ranges from 1-200 to 1-20 inch, and they are lined with columnar epithelium, which is ciliated in most of the cysts; they are filled with degenerated mucoid tissue, which has scattered in it large epithelial cells. Besides the cystic formation, there is a decided cancerous infiltration which occurs in patches, and has the appearance of a cylindrical epithelioma. The uterus is also infiltrated with the carcinoma, but has not undergone cystic degeneration.

Respectfully,
W. M. GRAY.”

While a reference to the statistics of supra-vaginal hysterectomy is not in place in a report accompanying a pathological specimen, still a few words on this subject may be pardoned.

The impression prevails, I think, that this is a very fatal operation when performed, as it usually is, for the removal of uterine fibroids; and yet Keith has recently reported 38 cases of the removal of uteri above the internal os, along with fibroid tumors, the average weight of which was fourteen pounds, with only 2 deaths, or a mortality of about eight per cent. In the last edition of his book, Sir Spencer Wells gives the results after hysterectomy in 39 operations with 29 deaths. In Bigelow’s tables, which were supposed to place conveniently on record all published cases up to the date of his paper, there were 359 operations, with 227 recoveries and 132 deaths. These operations were done in all parts of the world, and in many cases in series of twos and threes by inexperienced operators, and hence this great mortality.

It would seem that the greatest success is attained by those who have had a large experience in ovariectomy. Knowsley Thornton gives similar testimony. In 1882, he reported 25 cases of removal of uterine tumor, with 9 deaths. In 1883, he read a paper in Liverpool on this subject, in which he reported 16 *additional* operations, with only one death. Mr. Thornton has recently sent me another paper, in which he reports 38 new cases of supra-vaginal hysterectomy, with only two deaths. Keith says that Bantock is by far the most successful of all the London operators, and his numbers are the largest.

Lawson Tait, Schröder and Hegar have also had good results in this operation, when compared with their earlier experience. For the relief of the ordinary uterine myoma, Tait's operation offers the greatest safety, and best results. Tait recently reported 58 cases of the removal of the appendages for the cure of myoma, with success in every case; and adding his previous year's experience of 50 cases, makes a series of 108 operations, with but two deaths. There are certain cases, however, which demand surgical relief, which can only be obtained by supra-vaginal hysterectomy; and it is a satisfaction to see the statistics of this very formidable operation improving.

CASE VII.—This is a case of simple unilocular ovarian cyst, which was removed October 12th, 1885, from a lady in a private room, in Providence Hospital. There is little of interest connected with it, except that there were firm and dangerous adhesions to the vermiform appendix, and to the intestine just below it. She and her husband both inform me that she was not long ago under the care of a gynecologist, who assured them positively, both verbally and by letter, that there was nothing the matter, except an unusual deposit of fat. The cyst and contents weighed just twelve pounds.

The lady, Mrs. P., 23 years of age, is the mother of two children, the youngest being four years old; had a miscarriage three years ago, since which time she has been slowly increasing in size. She came to me from Falls Church, Va. Drs. Lincoln and Busey agreed with my diagnosis, and, with me, recommended immediate operation. I sent this lady to Providence Hospital on Monday, and operated on the fol-

lowing Thursday morning. The patient rallied well, and did not have a bad symptom of any kind. Her highest temperature was 100° , and her highest pulse 82. She had no pain, and took no medicine, except one suppository of ten grains of quinia and one-fourth grain of morphia, just after being placed in bed, and that was unnecessary. She left the Hospital in a month perfectly well, and has remained well ever since.

CASE VIII.—Miss C., aged 19, white, the daughter of a farmer in Montgomery county, Md., came to me upon the recommendation of her physician in the county, Dr. Carraher, and of Dr. Kleinschmidt, her consulting physician in Washington, D. C. I saw her first in October, 1885, when Dr. Frank Baker brought her to my office for examination, with special reference to ovarian disease. I discovered none at that time, and recommended no operation. Dr. Baker understood, from statements from the patient and her family, that she had had spasms from infancy. They, however, occurred during the week preceding and at the time of her periods, and a few days subsequent to the flow—two weeks out of each month. Yet I did not detect the ovarian influence in her case, and recommended a continuance of the bromides. I am informed by Dr. Baker and Dr. Kleinschmidt that they both succeeded in keeping her free from convulsions—one for nine weeks and the other for eleven—by the use of very large doses of this drug, giving her, the girl told me, as high as 300 grains a day for some time. Her condition was such, while under its influence, as to make her convulsions preferable. Most of the time, when “sufficiently drugged,” as they termed it, to keep off the spasms, she was so stupid and helpless as to be compelled to take her bed; and her cerebral functions were so clouded as to make her, for the time, little less than idiotic. After going on in this way for six months longer, the young lady finally rebelled, and refused to take more medicine, and demanded, if there was a surgical operation which offered any hope of relief, that it should be performed, and this chance given her to get well. She preferred death to her present uncertainties and sufferings. She was sent to a private room in Providence Hospital, and I had her under careful observation for about a week, when I determined to comply with the earnest solicitations of her mother and herself, and remove her ovaries and tubes.

There had evidently been a wrong impression about the time when the spasms began; they were, and had been, a true epilepsy from infancy. The following is the history of

the case given to me by Mrs. C., with the full knowledge that it was to influence my mind as to the propriety of this operation, and that if the facts were mistated, a fatal error might be the result. Mrs. C. stated that all were mistaken who believed that her daughter's spasms had originated in childhood, and continued ever since. The facts are as follows: She had a spasm when she was ten days old, no one knew why. She had no more until she was three years old, when an attack of pneumonia was ushered in by a spasm. She had no more until she was between twelve and thirteen years old, when they began to occur at monthly intervals, accompanied by pain in the head, back, and uterine region. Her physician told them that her menses were about to appear, and that she would be better as soon as they were established. She had her first period when she was fourteen years and five months old. The spasms were aggravated, and the pains increased at her periods. This state of things continued, up to the time of her operation, uninfluenced by medicine, except as stated above, although, to use her mother's expression, she had taken "gallons, and gallons, and gallons of it," and positively refuses to take any more. With this statement written out, and read to Katie, who confirmed it as far as her memory went, I concluded to operate.

I believed her case to be one of menstrual or ovaro-epilepsy. I was more ready to accede to the wishes of the patient and her mother, since I had read the address of Dr. Gordon, of Portland, to the American Medical Association, as Chairman of the Section on Obstetrics and Gynæcology. Dr. Gordon reported 25 cases of otherwise incurable, or uncured cases, of prolonged hysteria, treated by Tait's operation, and a cure was produced of the most dreadful and painful symptoms in all his cases, but one or two. Women who had been great burdens to their friends, and to themselves, for years, were, by this operation, restored to lives of usefulness and happiness. With this report before me, I felt, although this was a new departure in the treatment of hysteria, that I had sufficient precedent to operate in this case.

On the 27th of May I removed her uterine appendages, in the presence of Drs. Kleinschmidt, T. C. Smith, Carraher, Cuthbert, the house doctor, and a medical student. I found in the left ovary a cystic tumor about the size of a small hen's egg. There were cysts in both ovaries. The largest

cyst was ruptured in its removal. The patient made a perfect recovery. Twelve days after her operation, she was up and dressed, and visiting in the rooms of other patients. She had no pain nor rise of pulse, or temperature above 100° , and took no medicine. Sutures were removed on the ninth day, and union found perfect.

I have received the following letter from the mother of the patient, which I append to the history; also the report of Dr. Lamb, Pathologist of the Army Medical Museum:

"DR. JOHNSON:—My daughter has been treated by eight different doctors for six years, and never derived any benefit from the medicine they gave her. She has taken, not pints of medicine, but gallons, and I believe I would be safe in saying a barrel. She has taken it until it has nearly destroyed her mind, and greatly affected her throat. She grew worse every year. The operation that was performed I fairly understood, for death would have been a great relief to her, and I am perfectly happy at her present condition, and so is she."

Ovaries and large part of each Fallopian tube. Right ovary, $1\frac{3}{8}$ inches in diameter, $\frac{3}{8}$ inch thick; contained a number of small cysts, and one large one. Left ovary converted into two cysts, respectively $\frac{3}{4}$ and $1\frac{1}{4}$ inches in diameter.

This girl and her mother called on me last month, and made a very satisfactory report. A few spasms had occurred, but they had been much less frequent or severe. She was taking no medicine, was entirely free of her old pain, and had gained, they estimated, about twenty-five pounds.

CASE IX —Mrs. —, aged 65, married, the mother of several children, came to me from Chicago. Her children lived in New York city, and she preferred to be operated on near them. She had noticed the presence of her tumor for more than two years, and its growth of late had become more rapid. She had lost considerable flesh and strength, and was advised by Dr. Curtis, of Chicago, to have her tumor removed. She made up her mind quite suddenly. Settled all her worldly affairs, came to me and requested the operation to be done on the same day, or the next after her visit. I saw her Thursday of one week, and operated on Tuesday of the next, in a private room of the Garfield Hospital. The operation was simple and successful. The sac came out through an incision of three inches or less. Its only adhesion was to the broad ligament. She rallied well, and with the exception of unusual nausea, did well for three days, when she had an attack of parotiditis, and a diffused erysipelatous, redness and swelling over one side of her face, nose, and forehead. Her vomiting continued. She retained scarcely any nourishment, either by the mouth or by the rectum, and gradually sank away, and died on the sixth day.

During the last twenty-four hours, she became more and more difficult to rouse, and died of exhaustion. Dr. J. Ford Thompson made an autopsy, but found no cause for the fatal result.

CASE X.—Miss G., aged 21, came to me in June, 1885. Had always enjoyed good health. First noticed an enlargement in the left side of her abdomen two years ago, but it had not interfered much with her social pleasures or outdoor amusements until quite recently; but a few weeks before her operation she played seventy-five games of lawn-tennis in one day.

I examined her on the 4th of June, 1885, and arranged at once for the operation, and removed the tumor on the 8th of the same month. Her father was a physician, and was anxious for an immediate operation after he knew the nature of his daughter's ailment, and as the season was rapidly growing warmer, it was done at once. The operation, as in the preceding case, was of the most simple kind; small incision, unilocular cyst; no adhesions. Operation completed in twenty minutes.

On the third day her menses came on. A diarrhœa set in for a few days, but was controlled. Union perfect by first intention. Sutures all removed by eighth day, and every hope was entertained of perfect recovery. On the ninth day she had a chill, with total suppression of urine; went into a state of collapse, from which she could not be rallied, and died on the tenth day after the operation. It was thought by some that she died of septic peritonitis, but there is some evidence to indicate that the kidneys were at fault.

The sad termination of this case was a very bitter disappointment to me. We had all passed through the agony of suspense, and were emerging from the clouds of darkness and tormenting anxiety into the sunshine of certain cure, when this chill and collapse came, and with it the death of a beautiful girl, who was the joy of a happy house.

CASE XI.—Mrs. T., aged 31, widow, no children, was sent to me by Dr. Lincoln, of Washington. Tumor had been growing about two years. Upon operation, 21st April, 1886, it turned out to be a parovian cyst. Small incision $2\frac{1}{2}$ inches; no adhesions. Tumor weighed fifteen pounds. Recovery perfect, except several stitch-hole abscesses, which were a source of annoyance for two weeks. Mrs. T. called on me a week ago, and reports herself perfectly cured.

CASE XII.—Operation 7th of May, 1886. Mrs. S. had been a sufferer from uterine hæmorrhages for more than a

year. On several occasions the flow was so great as to endanger life. Her tumor was small and tense at first, and upon the left side, and appeared to her physician to be a uterine fibroid, the hæmorrhages lending color and emphasis to the opinion. She had been under the care of a number of doctors. When she came to me her abdomen was larger than if nine months pregnant. She had lost much flesh; was pale, weak, and anæmic. Owing to the unusual thickness of the walls of the tumor, the incision had to be longer than usual, it being about five inches. The solid part of the tumor weighed eight pounds, the fluid portion twelve pounds—total, twenty pounds. The patient was 42 years of age, the mother of several children, and the subject of frequent and severe uterine hæmorrhage. I removed the other ovary also, which, upon examination, proved to be undergoing cystic degeneration. Union by first intention. No unfavorable symptoms. Left the hospital in a month, and has been constantly gaining ever since in flesh, health, and strength, and is now well.

CASE XIII.—I saw at the request of Dr. B. B. Adams, of Washington, on the 18th of October, 1886. She was unmarried, aged 31, and had been well up to two months ago, except attacks of typhoid fever and jaundice, four years ago. Her sisters first noticed her change of form, which progressed with unusual rapidity until she reached the size of a woman eight or nine months pregnant. Her condition attracted the attention of friends and neighbors; and though quite able to do so, reluctantly went in public. Her disease and her state of mind so preyed upon her that she lost flesh rapidly, and was fast becoming an invalid. Upon my advice, she took a private room in the Providence Hospital, and on the 23d of October, I made a two-inch incision, and removed what proved to be a par-ovarian cyst, weighing twelve pounds. She has, up to this moment, had no unfavorable symptoms, and has every prospect of getting perfectly well.

CASE XIV.—Mrs. C., white, aged 24, married for three years, has been subject to the most dreadful attacks of menstrual or ovaro-epilepsy for the past ten years. She was sent to me by Dr. J. W. Bayne, of Washington. Mrs. C. had been under the care of at least twelve different physicians, including Dr. Hammond, of New York. She had been repeatedly told by Dr. Hammond and others that the cause of her trouble was ovarian, and believed to be incurable, except by removal of these organs.

During these ten years the patient had worn out the endurance of as many doctors, who had passed her on to the next, and of several hospitals, which had discharged her after exhausting their staffs, nurses, and drugs to no purpose. She had tired out her relatives, friends, and neighbors in watching and holding her. While her periods were irregular, the menstrual molimen occurred with painful regularity, and before it, during, and afterwards, she had the most active and distressing clonic spasms. She would, on some occasions, remain unconscious for a half a day and more at a time, and, when in an attack, would require the strength of a number of women to hold her, including all those in the house and what neighbors would come in, until her husband could be sent for. She has been much worse since marriage than before. The patient was unable to do much if any useful work about her house. She complained of almost constant pain in the pelvic region, and was losing ground mentally as well as physically.

When I was asked by Dr. Bayne to see her, I was informed of her previous history and present condition. A vaginal examination caused much pain and brought on her convulsions. I did not feel her ovaries.

Though requested by the attending physician, the patient, and her family to remove the uterine appendages, her case did not seem to me at that time to be one which held out a very strong promise of cure by this operation, and not wishing to have a failure, I declined to do the operation.

Two months later their importunities were so great, and also their anxiety to take the risk of a cure as well as the risk to life, which were *fully explained to them all*, I made another examination under ether. I found the ovaries atrophied and adherent to the tubes and surrounding structures. Believing that cause enough existed for the production of her symptoms, I agreed to operate. I had the patient take a private room in the Providence Hospital, and on the 27th October I removed her uterine appendages.

It is now two weeks since the operation, and her present condition is all that one could expect or wish. I anticipate that she will have modified spasms for a while at the time when her periods are due, but hope they will grow less and less severe until they finally disappear. Her change of life, produced by the operation, may not be any more sudden than when it occurs in the usual way. If at the end of two or three years she is free of her old troubles, I shall feel that the operation is a success and was properly done. If she is

no better, I shall regret it, and may decide not to operate on this class of cases any more. The evidence in recent medical literature is not conclusive on this question.

Even Spencer Wells, in the recent symposium in the *American Journal of Medical Sciences*, does not decide against it. He says he thinks everything else should be done first, and well done, and continued for several years, and that all the risks and dangers of the operation should be *fully explained* to the patients and their friends. And so do I. But what shall we do with those patients which resist all treatment—marriage included—for ten years, and are growing worse?

ART. III.—**Blind External Fistula.*** By ARCHER ATKINSON, M. D., late Professor Materia Medica and Dermatology; Professor Practice of Medicine in Baltimore Medical College; Member of Maryland Medico-Chirurgical Association, and of Baltimore Medical Society; Member of Baltimore Microscopical Society, and ex-Member of Maryland Academy of Science, etc., Baltimore, Md.

We may almost say that rectal diseases, now so common, are, like gout, the outgrowth mainly of the æsthetic modes of living. It is chiefly in the large cities that we find such affections. Persons engaged in agricultural pursuits and most exposed to injury from accidents of field or flood, are less troubled in this way. In cities men indulge more in rich food; in sweets, pastry, and keep late hours. Men in towns sit more than they work, making the head, and not their hands, provide for the wants of the body; and are more bent on attention to the punctual hours of business than to the necessities of nature, besides being more given to indulgence in alcoholic drink.

It is wonderful how the idea of piles and fistulæ has taken possession of the public mind; and for the masses, any other than these troubles about the rectum are as a *terra incognita*, and they can scarcely be made to believe that other affec-

*Read by invitation before the Medical Society of Virginia during its Seventeenth Annual Session, at Fredericksburg, Va., October 28th, 1886.

tions can exist here save as associated with one or the other. It is true *these two* are the *most frequent* lesions of the lower bowel, and should be for that reason the best understood. Mr. Allingham, out of a list of 4,000 out-door patients registered for rectal diseases at St. Mark's Hospital, London, enumerates *fistula* as occurring in some of its forms in 1,208 cases, while next in frequency come hæmorrhoids, internal and external, both varieties reaching 965. Next come fissures to the number of 446—these, irrespective of any taint of constitution, which initiated or kept up these conditions. Next we find he places the various syphilitic affections (lesions) of anus. Thus we have *fistulæ* to the extent of over one-quarter of the diseases coming to this special Hospital, or more than twenty-five per cent., while piles occur in the proportion of one case in every five, say, and the syphilitic cases run up to 348, or about one in every twelve.* Of abscesses—the most frequent causes of *fistulæ*—there were 196. No doubt cases of abscess are more frequent, as patients do not come for hospital treatment until they shall have found their home treatment by anodyne lotions and poultices to fail in affording relief to the discharge which follows the opening of the abscess through the wall of the bowel, whether as the result of *fistula* commencing from within or without.

Now these abscesses in 151 cases ended by forming true *fistulæ* out of the 196 patients recorded; say in the proportion of one case to every one-and-a-third, the remaining 45 cases ending in recovery as far as known. We thus see how often *fistula* is the result of abscess in the vicinity of the anus, and I believe most cases have their starting point in some inflammation of the loose tissues which serve to pad the bowel; and when this inflammation runs on to the suppurative stage, the matter burrows and finds its way in most cases through the wall of the intestine, constituting some one of the forms of *fistulæ*. This process may be months in

*Of such cases Fournier makes *syphilides ulcerating* and *gumulous syphilides* and a third variety, which he calls *ano-rectal syphiloma*, and he makes these lesions most common in females, say in proportion of 8 to 1. The chief inconvenience of syphilis in the rectum is the occurrence of stricture.

going on and may give but little pain. This we can the better understand when we consider how thin is the bowel; how it becomes distended, and therefore thinner from the accumulated fæces which the patient dreads to void, because of the pain attendant on the action.

It was thought by Brodie that a fistula must of necessity be accompanied by an opening through the coat of the bowel. Now there are certainly fistulæ which do not enter the bowel at all. We have what is called the *blind external fistula*; the *blind internal* and the *complete fistula*, which last consists of a track reaching from the interior of the bowel to some point along the perineum, and opening there.

Webster defines a fistula as a *permanent abnormal opening* into the soft parts with a *constant* discharge—a deep narrow, chronic abscess, as a salivary fistula or an anal fistula. Stormonth's *English Dictionary* gives it as "hollow reed," from fistula, a deep, narrow ulcer or sore. Italian, fistola; French, fistule. Richardson defines it as "a pipe of reeds or other things having the hollowness of a pipe." Dunglison gives fistula as "a solution of continuity of greater or less depth and sinuosity; the opening of which is narrow and the disease kept up by an altered texture of the parts, so that it is not disposed to heal." Nysten calls it "*an ulcer in the form of a narrow canal, deep, more or less sinuous, brought on by a local pathological condition, or by the presence of a foreign body, sometimes having two openings, one at either end, being then a complete fistula—one opening being under the skin, the other in the track or a cavity covered with mucous membrane.*" At other times they have but one opening (incomplete). "To this single opening the French give the name "*borgne*," or one-eyed fistula, meaning a track with no communication with the intestine (we call it blind), having but one orifice; hence blind external fistula open only outwards, ending more or less deeply in a cul-de-sac, while the blind internal fistula is one which, having also one opening only, opens inwardly into the bowel, whose depth is in the thickness of the soft parts.

This compiler goes on to say that fistulæ often form as the result of large abscesses, especially of the kind called *cold*

abscesses, or when a tendon or an aponeurotic tissue has been affected, or where the sac is too dependent to allow of drainage of the pus. This may be long or short, straight or tortuous. There may be a great amount of burrowing as seen in a gentleman a few years ago, who had been treated in New York for a double fistula. This case continued for six months, and ended by bursting in the right groin after intense suffering, which was referred to the region of the right kidney. There was during the whole time that he continued my patient an oozing from the fistula in perineo, which he had been told was cured up. The real trouble here was a *psoas abscess*, which had first partially discharged by burrowing around the rectum, but whose track, becoming closed, after the intensity of the inflammation had subsided, ended by pointing in the fold of the groin.*

Again, there may be a great amount of bruising, with long threatening of abscess formation, and yet the part take on resolution to the surprise of both patient and physician. One such case I recall in the Fall of 1865, when a gentleman in fox-hunting was thrown back against the saddle and badly bruised. The whole buttock of the right side became enormously swollen, painful and deeply reddened; but by dint of repeated blistering, and afterwards dressing the half healed blistered surface with belladonna ointment and as strong iodine ointment as the part could stand, the inflammation subsided without running into suppuration. We cannot, however, feel secure, even after the lapse of much time, that further trouble will *not arise* in these cases of deep bruising, as illustrated in the case of a lady who came to this city to be treated for a singular enlargement in the left buttock.

The patient was about 35 years of age, unmarried and fairly fleshy. She expected to be married, and naturally wished to be rid of her embarrassment. About ten years before consulting me her horse leaped a ditch, bruising her left

*This patient rather ascribed his suffering to sitting on cold steps; and this is thought by some to be now and then the starting point in producing rectal diseases, though we are not informed by Mr. Dickens whether the father of Solomon Daisy, the Parish Clerk of Chigwell, London, contracted any such trouble from "sitting down to take his dinners on the cold tombstones."

seat. For some time the part was tender, but she paid little attention to it. After many months the part became very tender, much swollen and reddened. Some weeks later she discovered an oozing of very thin matter from the outer side of the seat. When I saw the case about nine years after, there was no opening. In course of time the swelling lessened, the pain subsided, but there remained more or less hardness. The feel on examination was that of a large cord or knot of twisted cotton buried beneath the surface. Neither pressure nor pinching up gave any decided pain, nor could any matter be squeezed through the end where the opening had been. The mass was fixed and could not be pushed to either side. The hardness had for some time been causing pain when she sat upright, unless she interposed a cushion to relieve the pressure. She was placed under an anæsthetic and the part thoroughly examined. Then an incision was made at the end of the ridge, and probing revealed the extent of the trouble. The direction of the track could be both seen and felt in following the probe as it entered the sinus, but the end of the probe did not enter the bowel even by the most careful manipulation.

Now had this track ever communicated with the bowel? The finger in the bowel could not detect any cicatrix on that side through which matter had ever passed through the intestine. If there had ever been any opening within the bowel in reach of the finger, it should have been felt. The matter pressed out by the exploratory incision was thick, badly smelling; not exactly *fecal* in smell or in color, but of the consistence and color of old putty. The walls of the sinus were hard like young gristle, and it was evident that simply emptying the sac would be followed by its filling up again; that injecting the sac (it was really a tunnel with cartilaginous walls) would be futile so far as exciting plastic inflammation was concerned. So it was decided to slit up the entire tunnel and turn out its contents, which would have weighed one-and-a-half ounce. The interior of the channel was shiny, like what in former days was called a "pyogenic membrane," the walls partaking of the tendinous structure which we find mixed in with the gluteal muscles. The inner end of the track was deeper than the outer, showing the direction the matter had travelled, and the amount of matter was greatest there.

The entire gristly mass was dissected out and the part left unclosed, save with a filling of carbolized cotton kept in place by cross-bars of adhesive plaster. This dressing was

removed every three days, and the part well washed with carbolized water. The cavity soon filled about half with healthy granulations, when it was dressed without the packing. In twelve days the whole wound had filled up. The parts were supported so that the resulting cicatrix would be as small as possible. If we had known then of the iodoform tissue we would have used it. When the lady left the city the part had entirely healed, and she has since been heard from with the assurance of perfect recovery.

Here, then, was a case which might well have given rise to a doubt as to whether there was a real fistula resulting from a severe bruise, or simply a cold abscess following the subsidence of a large phlegmon of the buttock. The contents certainly suggest the idea of a cold abscess filled in with firm cheesy matter. While the color of the contents was much darker than we usually find in cold abscesses, and the smell much greater, still the whole behavior pointed to such an abscess; but, on the other hand, most cold abscesses that the writer has seen approached more or less the rounded shape. We know that abscesses do occur in the cellular tissue about the rectum without an opening into the bowel, but in most cases this opening is found to exist. This, however, does not seem to obtain in what are called ischio-rectal abscesses, which, however, are not really abscesses of the rectum; and when the tendency is not to open inwardly at all, but to form the bulge just inside the tuberosity of the ischium, suggesting to us the caution to open freely as early as we find that matter has formed. This is the only way to afford relief in these cases, and indeed the proper mode of procedure in all abscesses, wherever located, especially when seated in the perineum, because of the immense suffering they occasion, as well as because of their great aptitude to form fistulous openings into the bowel; or even worse, to burrow around that canal.

Mr. Allingham does not in precise words say what a fistula is, though he leaves on the mind of the reader almost the track itself. Ashton comes nearer in words to defining it by saying, "an abscess found in the ischio-rectal fossa, although opened early by free incision and before the cavity becomes greatly distended with pus, frequently will not heal."

It may fill up and contract to a certain extent, but it does not become entirely obliterated—a narrow track remaining indisposed, from various causes, to yield further to reparative action without surgical interference. “It is this sinus which constitutes the affection, which is designated fistula in ano.” This writer defines a “blind external fistula” as one which has no communication with the bowel, and says it is very rare—an intestinal opening *almost always existing*, if the abscess has degenerated into that state in which the term fistulous may be applied.”

Sir Benj. Brodie says, “I believe this is the way in which fistulæ in ano are *always* formed; normally the disease is originally an ulcer of the mucous membrane of the bowel, extending through the *muscular tunic* into the cellular membrane, external to the intestine; and I will state my reason for that opinion. The matter is of great importance as a question of pathology, but it is also of great importance in surgical practice. It is admitted by every one, that in the greater number of cases of fistula in ano, there is an internal opening to the gut as well as the outer opening, and I am satisfied the inner opening *always* exists, because I *scarcely ever fail* to find it. now that I look for it in the *proper place* and *seek it carefully*. I have in a dead body examined the parts where fistulæ had existed several times, and in *every instance* I have found an inner opening to it.”

Mr. Syme says, “I do not hesitate to affirm that when a fistula in ano is formed, the mucous membrane always remains entire in the first instance, and is never perforated until after suppuration has taken place.”

M. Ribes says, “In 100 cases of fistula of this part, 99 are formed by this procedure.”

Ribes examined seventy-five bodies which had fistula at the time of death. In the majority the internal opening was just above the point of junction of the mucous membrane of the intestine and the integument of the anus; and not in a single instance did he find it situated at a greater distance from the anal margin than five or six lines.

Several eminent surgeons, says Ashton, have proven the correctness of this observation. This same Ribes first showed that the internal opening of fistula was never at a greater distance than $1\frac{1}{4}$ inch from (above) the anus.

Vidal refers fistulæ to abscesses about the anus. He makes, first, incomplete fistulæ, and calls them so, because—first, they are not perfect fistulæ, in that they lack the second opening. He says they really do exist, but qualifies the remark by adding that they really finish by becoming complete tracks; and goes on to say that to deny bluntly that such fistulæ do exist would be to pervert facts, and to question the truth which all surgeons ought to know. This same author makes the complete fistula have both an internal and an external opening into the bowel. He adds, the external orifice opens generally on one side or the other of the anus, sometimes behind, but *rarely in front*. He says that several external openings may correspond with but *one inner* opening, and that where there are several openings externally, the canal may be divided into *several branches*, which finally converge towards the intestinal opening. He says there may be caverns in the track of the fistula, and they may be many and large, in cases of old fistulæ, and where several abscesses have formed in succession. These may extend along the side of the ischium, above the coccyx, and towards the sacrum; and they may surround the bowel, and leave it as if suspended in the centre of a cavity. He adds, the track is often tortuous, beginning in rear and running towards the front; or it may begin straight and diverge abruptly *at elbow*, and even march *in zigzag* fashion.

Vidal asks, "Can nature cure fistula?" and thus replies: "The radical and natural cure of fistula is one of the best established facts in pathology. It is true the greater number of cures are in cases of blind, incomplete fistulæ; but there are few physicians who have not seen spontaneous cures of complete fistulæ. They heal up first by taking on fresh inflammation, which, instead of running on to form abscesses, establish adhesions, which gradually narrow and eventually close the canal; and secondly, by the patient's being placed under good hygienic influences, and finding his nutrition improve—the diseased cellular tissue of the part taking on fresh, healthy action, the cavities filling up with entire closure of track. This Velpeau has also noticed; and Vidal cites the case of a priest with fistula in ano, who, dreading

the knife, put off from day to day submitting to an operation, until finally "nature, sweet restorer," effected for him the cure which he was not heroic enough to undergo by the surgeon's help.

The following is a case of abscess on both sides of the rectum as result of a fall: More or less pain was felt at the time of the fall, some years ago. On inspection, the greater part of the perineum was hardened and of a dark color, and the adjacent sides of the buttocks were bathed in pus. Pressure caused but little pain, and the skin seemed to glide over the parts beneath. His physician asked me to see the case with him, October 9th, 1886. The man was for a long time treated for fistula in ano, but the case did not improve. Thick pus flowed from the larger orifice on the left side, and the finger made to press parallel with the anus on that side, and gradually to approach the orifice, caused an increased flow from this opening, showing the direction of the track. This sinus was about $1\frac{1}{2}$ inch long, beginning $\frac{1}{2}$ inch from the side of the bowel, and running diagonally outwards and backwards. The probe's point could be moved an inch laterally, showing the width of the cavity in which it rested. A smaller aperture, almost a pin's point in size, was found an inch behind the larger opening on the same side, and from this came, on pressure, a thin, bubbly fluid of broken-down pus. Here the pressure, to force this out, had to be from the rear. The probe entered here on enlarging the opening to a distance of at least four inches backwards towards the coccyx, not at its tip, but fully an inch above the tip. This was by far the longest and the deepest sinus on that side. The parts about and around were hard, and of the color of an egg-plant. The floor of the perineum, on each side and behind for two inches, was hard, and presented several closed apertures, showing where various abscesses had opened, until the whole tissue, beginning opposite the middle of, and opening and running back beyond the coccyx on both sides, was indurated, reddened, and undermined with cavities. On the other side a like state of things existed, showing several points of exit for the pus of old abscesses. The connection here, too, was broken up from the destructive action of the pus. After the probe was carried as far as the track allowed *on each side*, the finger was introduced into the rectum, and failed to feel the point of the probe—nor could the end of the probe be made to insinuate itself into the bowel—the finger in the rectum readily feeling the impulse, jar, and the

pressure of the probe's end, but it was only as a bulge. This examination was proceeded with *gently* and *slowly*, the patient being profoundly under the influence of chloroform. There was no hurry, as the desire of both patient and physicians was to ascertain fully the nature and extent of the trouble.

It was now a question of the existence of a complete fistula or not. The examination was therefore as thorough as possible; and even after the operation the flaps were separately drawn aside, and thoroughly searched for any orifices or beginnings of sinuses which might have escaped us before the parts were divided. The grooved director was then placed in the first described orifice, and pushed to the bottom of the sinus parallel with the side (left) of the bowel, and on this director the knife was made to glide until the entire track was divided, and then, lest any bagging should remain, the knife was carried up half an inch higher. Next followed the division of the longer track leading back to the coccyx, and even beyond it. About the middle of this sinus, when the part was turned out, another orifice half an inch deep was found, and incised at right angles to the long cut. The finger could find no caries or necrosed portion of os coccygis, nor was there any roughness or looseness to be discovered.

The right side now claiming our attention, the probe found its way four inches backwards and outwards. The two long incisions would have here come together like the letter V behind the coccyx, but at a point opposite this bone the right sinus turned suddenly outwards for an inch. This likewise was slit up. The wounds were well cleansed, and time given to see if there would be much hæmorrhage, when, finding the flow of blood to cease, cotton wet with carbolized water was loosely twisted into rolls the size of the finger, and gently packed in between the lips of the wound, to be left for three days—the whole perineum being covered with a large wad of cotton, secured nicely by a T bandage.

In two hours the attending physician was recalled by telephone, and found the blood had started and saturated the bed, the patient looking pale, and vomiting freely of bile. On his arrival the bleeding had stopped, but he found the dressings displaced by the flow of blood. He replaced the dressings, packing the cotton firmly in and securing it well with bandage. I saw him next day, in the absence of his physician, and found no further hæmorrhage. He was still vomiting. I put him on milk and lime-water, with Valen-

tine's meat juice, to be taken *freely*, and enjoined him to keep absolutely quiet and free from company, which is a difficult thing to manage, it being Sunday. I left a vial of Monsel's solution, with directions how to use it in case of need. A sleeping potion was ordered of 30 drops of deodorized tinct. opium, in an ounce of camphor-water.

Next morning—no return of hæmorrhage, very little pain; slept well on the opiate, which will aid in binding bowel. Parts beginning now to matter, and wound to contract some. Each day the wound continued to do well, and give off healthy and abundant pus, until the 16th, when the patient became despondent, yellowish, and lost appetite, but without fever. His general condition appeared bad, though the main wounds were granulating nicely by the help of a solution of bichloride of mercury in glycerine as an antiseptic dressing. The thin flap near the rim of the bowel had assumed an indolent, grayish hue. This, with the other wounds, was now washed with Condyl's fluid as antiseptic, and a dilute wash of nitric acid applied to the flap, with the hope of stimulating the formation of granulations.

On the 18th, there was improvement in the man's appearance and spirits. An injection of warm water and soap was given to wash out the bowel. On the 21st as there was no return of the former injection, another was administered, with the effect of bringing away a great amount of black fæcal matter, mixed with old bile.

On the night of the 20th, the wound bled some, but not enough to occasion uneasiness, save that the man had no blood to spare.

Vidal says (p. 640, Vol. IV), "The bleeding which sometimes follows the operation for fistula is more useful than hurtful, and almost always stops of itself."

As a *complication* with phthisis, and in its special relation to the acceptability of fistulous cases in Life Insurance, much importance is of late being given to it. Dr. Leron, in his excellent work on "Examinations for Life Insurance," in which he was materially aided by Dr. Horace G. Hill, of Philadelphia, says, under the head of Fistula:

"It is extremely difficult to heal this disease, especially in consumptives. Consumptive applicants should of course be rejected. If in other cases the disorder is large, burrowing and exhausting, or has shown obstinacy under curative treatment, it disqualifies the applicant. Reasonable care

should be used in determining whether the case is of consumptive origin or not. If originating from consumption, the best surgical means will fail to cure. The Examiner should here recognize the necessity of being very clear and positive in his conclusion before recommending a risk." Again, this writer continues: "No applicant with fistula in ano should be accepted until the fistula is healed. Even then the Examiner must be convinced that the local lesion has not been associated with, or dependent upon, the strumous diathesis or constitutional disease."

It has been shown that for a period of thirty years there have been reported, in thirty-seven Life Insurance Companies, twelve deaths from fistula in ano, and all these were in *males*. As to the supposed beneficial drain from the presence of fistula in ano, or other open sore, the medical world is much divided. Drains are, as a rule, to be deprecated; the more drains the worse, whether direct or counter drains. I have known persons only too anxious to keep discharges going as derivatives (so to speak) from worse troubles. One gentleman, I remember, keeps an open sore on his back. He says he feels all the better for it, supposing himself to be phthisically inclined. Another has a fistula, or hæmorrhoid, which he would not have cured for half a fortune. On common sense principles, one drain (as that of purulent expectoration, hæmorrhage, or night-sweats in phthisis), should satisfy any ordinary man. I have a patient now with undoubted phthisis (though he has never had hæmorrhages, which occur in about two-thirds of the cases I have seen). He tells me he has had for six months a purulent discharge from the side of his bowel, as the result of an abscess. It annoys him, and he wants it righted, and I shall operate by ligature as soon as he is ready. With that view, I have him now on the compound syrup of hypophosphites (sometimes with the iron, quinine and strychnia, Fellows', or an imitation of it), now and then changing to McArthur's syrup of the same. I keep up one or the other of these hypophosphite syrups all the time, as I find the patient to take on excitement from the iron and strychnia. To each two-drachm dose of either of these compound syrups I add two drachms of

pure cod-liver oil, and sometimes the extract of malt in the same dose.*

Each drachm of Fellows' syrup contains $\frac{1}{64}$ grain of strychnia. This mixture of the oil, syrup and malt serves to build up the enfeebled system better than any other preparation with which I am acquainted. This, of course, would apply to any other preparation of the same articles. I know one or two druggists in Baltimore who put up just as good a syrup as either of the above; and when I know I can get at home an article as conscientiously prepared, I prefer to use it. I shall operate on this patient, because I believe the cure of his fistula will lessen the drain—which is helping to carry him off; and when we pray for deliverance from evil, we naturally mean from all the evils we can get rid of.

ART. IV.—**When is a Man Drunk?** By T. L. WRIGHT, M. D., Bellefontaine, O.

When, under the influence of alcoholic liquor, and by reason of it, the mind is moved from its normal state, and its operations are performed in an incoherent manner, and it is also incapable of righting itself by its own efforts, the man is drunk.

The *first* element in the condition, "drunk," is the untoward impression of alcohol upon the nervous system; and the *second* element is the impressible sway of that impression.

The actual magnitude or degree of the mental disturbance is not an essential point in deciding upon the fact; but the combined *certainly and tenacity* of the alcoholic impression is a determining element in the discussion. Yet the *extent* of the mental lawlessness is the measure in deciding the question, whether the confusion or delinquency of mind is indicative of the condition "drunk," or "drunker," or "drunkest."

*The preparations of malt which contain the *most extractive matter* and the *least alcohol* and *water* are of course to be preferred, as more tonic and stomachic than the weaker varieties.

Let it be borne in mind that there is no such thing as "half drunk," or "two-thirds drunk," or the like; and these terms are not to be found in any dictionary.

Another definition of the condition called "drunk," which involves the one given above, and besides, implies the reason for it, may be stated as follows: When consciousness becomes modified, in any manner whatever, by the influence of alcohol upon the sensibilities, and when that modification cannot be rectified by the exercise of innate nervous force, the man is drunk.

The scope of this is seen when we consider that consciousness is the mental attribute by which we know that we perceive, we think, we exist. Through consciousness, therefore, we recognize our personal identity, and are aware of *relationship* with the intrinsic world. It is obvious, that to have these conditions and relations in their true force and meaning, consciousness must be complete.

This mental attribute, however, may become disturbed from various causes, of which the poisonous influence of alcohol is a prominent one.

A corollary of the above is this: It cannot be denied that a mind, whose relations with matter or with other minds are aborted, or misled, or antagonized by an incomplete and deteriorated consciousness, should not be held to equal legal responsibility with minds not thus oppressed and entangled.

ART. V.—**Diphtheria—Recent Views regarding its Pathology and Treatment.*** By WILLIAM S. GORDON, M. D., Richmond, Va.

It is not my purpose in this paper to enter into a detailed discussion of diphtheria, but simply to present to you some of the recent views relating to the pathology, diagnosis, and treatment of the disease. So far as curative measures are concerned, we are confessedly very much in the dark; and after whatever reading is done, we feel like exclaiming, in the dying words of a poet—"Open the window, and let in more light."

* Read before Richmond Medical and Surgical Society, Nov. 9th, 1886.

Most of us believe that diphtheria is a zymotic constitutional disease, accompanied, as a rule, with characteristic local manifestations. So mild at one time as hardly to require actual treatment, we know it at other times to be so fierce in its onset and progress that remedies vanish before it like "the snow-fall on the river." The presence of a white, greyish, sometimes almost black, deposit on the fauces is the most common and noticeable feature in the disease. The prodromata may be more or less marked. Malaise, fever and acceleration of the pulse are usually observed. Yet these forerunners of diphtheria vary greatly in nature and degree, and we know of no symptom, or group of symptoms, which is constant. It is the blending of several symptoms which justifies us in saying unqualifiedly that we have this disease to treat. It is not necessary for me to dwell at length upon the differential diagnosis between diphtheria and other maladies for which it might be mistaken. The authorities are numerous, and, as far as possible, satisfactory. We are all familiar with the recorded signs, and any one who reads, for example, the excellent articles of Drs. Jacobi, Meigs, Pepper, and other observers, will know as much about the disease as we are yet permitted to know.

Allow me, however, to recall a few of the views regarding the pathology of diphtheria. Coats says that the membrane is an example of coagulation necrosis; that it is full of micrococci, which, either by their presence or effects, serve to keep the disease in full blast; and that there are marked differences between the deposit on the fauces and tonsils from that in the trachea and larynx. In the fauces, it is adherent to the mucous membrane, and seems to form a part of the changed upper surface of the membrane, while in the larynx and trachea there is no coagulation necrosis, and the membrane is not closely attached to the underlying mucous membrane. To quote the author's words: "In this disease the exudation which appears on the fauces is, indeed, in part a true fibrinous exudation, but it is also in part composed of the coagulated superficial portions of the mucous membrane."

Again: "In all cases of coagulation necrosis the tissue becomes more firm and solid. Sometimes the coagulation assumes a fibrillated character, but perhaps more frequently it is homogeneous, the structure of which the tissue is composed being obscured." Once more: "It is characteristic of the process that the nuclei of the cells become obscured, and are no longer brought into view by straining the tissue. Referring back to the formation of the white thrombus (p. 40), it will be remembered that the disappearance of the nucleus is there a characteristic occurrence; and in coagulation necrosis it may be regarded as of similar signification, implying the death of the cell. This peculiarity may be used to distinguish the existence of the process. If we stain a section of tissue, * * * and find that a piece shows no nuclei, we may infer that necrosis has occurred."

Beale states that there is nothing distinctive in the deposit. It consists of mucus, with its striations and corpuscles, epithelium, pus corpuscles, more or less numerous, according to the gravity of the case, and other cells which differ somewhat from mucous or pus cells. Some true film is thrown out. Blood discs may of course be present.

With regard to the true cause of the disease, there is no uniformity of opinion. Bacteria and micrococci are severely censured. It is astonishing, too, what a world of learned discussion these minute organisms have caused. We point our microscopes at them, try to find their source and habitat, and habits, shoot at them with carbolic acid, chloral hydrate, corrosive sublimate, and other germicides, and yet they live on and work on in their chosen place and manner, and often conquer us until we can get them away from their entrenchments. Are they the cause or the result of diphtheria? Whence do they come; why do they kill, and how do they kill? Or are they unworthy of so much notice? Certainly we are determined not to give up our researches. We believe that light *will* come after a time; but so far nothing definite can be stated concerning the relation of the micrococcus to diphtheria.

If allowed to express a mere opinion, I would say that I doubt whether every disease has its peculiar germ outside of

the body. Septic matters are produced and absorbed in our own bodies. Add to this constitutional peculiarities and weakness, and the tendency in some special organ to be more affected by morbid influences than another organ. Then, would it be unreasonable to infer that the same poison might be so modified by that organ upon which its force is mainly expended as to produce an organism peculiar to the disease of that organ? We know that almost every organ in the body has a visible parasite peculiar to itself. It is not fanciful to suppose, then, that each organ may have also a microscopic organism peculiar to itself. The question confronts us, "Are the original germs already in these organs latent and innocuous, but ready to be brought into life and activity by the same general cause, acting differently upon different organs; or do these germs enter the system from without, select their own habitat, and give rise to diseases of the organs in which they reside?" This is an important question for us to settle. It would seem that the mere introduction of germs into the body does not produce serious consequences. Two persons breathe the night air of a malarious region. One dies with a congestive chill, while the other escapes. Why the difference? In the first instance, the result must be attributable to the action of the poison upon organs already debilitated, and rendered liable to the deleterious effects of the malaria. If so, germs must be added to the predisposing causes of disease before the full results are manifested.

These questions with regard to the germ theory of disease are not mine alone. They occur to us all, and high authorities honestly cast doubts upon the utterances of men like Koch, and other distinguished observers. And yet, as will be seen later, it becomes necessary for us to treat germs, whether they be the cause or the result of disease. Certainly this truth holds in diphtheria, even if we believe that the germ theory bears, in a modified sense, the explanatory relation to diphtheria which the atomic theory does to practical chemistry.

But to be more practical, let me refer to a symptom of diphtheria which is regarded by many good authorities as

of great importance in aiding us to make an early diagnosis. This is the enlargement of the faucial and cervical glands. Careful examination should always be made for this sign, which, in connection with general symptoms and surrounding circumstances, may enable the practitioner to detect his concealed foe, and prepare for the fight with him. Otagia, also, as a premonitory or attendant symptom, should not be overlooked. Prostration, with its frequent weak, quick pulse, is an important symptom, when it occurs. In a case of suspected diphtheria, also, the whole body should be closely examined, especially if the throat is free of deposit, and the general symptoms are well marked; for we know that the presence of a deposit elsewhere than in the throat may settle the diagnosis. It is in those border-line cases, so to speak, that our conclusions are longest delayed. "Is it pure croup?" we ask ourselves; "or follicular pharyngitis, or tonsillitis, or a scarlatinal complication?" In some cases of diphtheria, not very well pronounced, it is no easy matter to ascertain what we are dealing with. Governed, of course, by general principles, we would rather err by calling some other milder disease diphtheria, and treating the patient accordingly, than say that the trouble was of slight importance, prescribe lightly, and return in a day or two to find diphtheria well advanced.

I have seen folliculous tonsillitis accompanied with considerable fever, a quick pulse, and marked debility. In such cases it is difficult at times to recognize the disease when the secretion from the follicles has been abundant, and sufficient to form patches on the fauces. Yet if seen in its early stages, the so-called "ulcerated sore throat," with its separate and small whitish deposits, is quite a different looking thing from the false membrane of diphtheria. Unfortunately, we are too often unable to see our patients soon enough.

It is interesting to know that diphtheria can be proved to be a constitutional disease before its usual local lesion is manifested. Dr. Bayles, of New York, reported, in 1876, a number of cases in which he scarified the skin in remote portions of the body prior to the appearance of the deposit

on the fauces. In every case but one it is stated that a peculiar fibro-plastic matter exuded upon the surface. In two cases this result followed scarification, when no deposit took place at all in the throat during the whole course of the disease. No injurious effects, it is said, followed this procedure; and a diagnosis of the disease was made in some of the cases before the condition of the throat itself verified the suspicion. Dr. Bayles gives his reasons for suspecting the invasion of diphtheria. Many of the symptoms to which he refers are the forerunners of other diseases; and, as Dr. B. himself states, a certain intuition enabled him to decide about the nature of his cases. It is claimed that no harm resulted from this diagnostic test.

The majority of observers now believe that diphtheria cannot be best cured, or cured at all, by caustics applied to a deposit on the throat or elsewhere. But the opinion that certain local applications are of great service is gaining ground. Whether or not the deposit, with its septic elements and its organisms, is a cause or a result of an abnormal constitutional condition, it is certainly rational to conclude that much is accomplished if we can prevent or lessen the infection of the system due to the absorption of poisonous matter. It is needless to refer to the antiseptics which have been faithfully used. Each one has its advocate; while the fact that almost every practitioner believes in the efficacy of such remedies leads us to believe that a thorough use of them is an important part of the treatment. Salicylic acid and eucalyptol have recently been favorably mentioned. Lactic acid, pepsin, trypsin, and the galvano-cautery, as absorbents of the deposit, have earnest advocates. Pilocarpine (cautiously used), cyanuret of mercury, bicarbonate of potassium and calomel have been spoken of in high terms. Pasteur has thought of inoculation. In a report of thirty cases, by Dr. Samuel W. Smith, in the *Medical Record* of March 27th, 1886, it is stated that no stimulant or antipyretic of any kind was required. There were five deaths. The treatment consisted of salt-water and borax, used freely in the nostrils with the syringe atomizer, the disinfection of the throat by the same means, and the internal use of iron and chlorate

potassium. A strictly milk diet was adhered to until convalescence was established. I will add that most of the cases were tonsillar and naso-pharyngeal. In four of the cases which recovered under this treatment, the organs of respiration were involved. I can refer only in a limited manner to this report. It was especially interesting to me, from the fact that stimulants and antiseptics were not at all used.

The bichloride of mercury is attracting much attention. Dr. R. W. Martin, in his report of the epidemic which prevailed in Pittsylvania in 1882, says: "Mercury was not used in the beginning of the epidemic, but very soon experience taught us that a full purgative dose of calomel in the outset seemed to modify the attack, and make it more manageable. The calomel was of special service if the headache was intense and the fever high. A solution of bichloride of mercury (one grain to $\mathfrak{z}\text{iv}$ of water) seemed to be of more general service than any other remedy administered, internally and locally, and children would take a teaspoonful of this solution when they would refuse everything else." One of Dr. M.'s conclusions is "that mercury is not a hurtful remedy, but really seems to possess as much or more power in destroying the disease germs than alcohol." It is previously stated, however, that "alcohol was the one great remedy." Dr. Pepper thinks highly of the following: Hydrarg. bichlor., gr. j, elixir bismuth and pepsin, $\mathfrak{z}\text{iv}$. S:—Teaspoonful every two hours for a child five years old.

One word with reference to mercury. It is well to remember that, if properly used, it is not always a depressing agent. Torpid digestive organs, especially a torpid liver and pancreas, with absorption of bile into the system, are very depressing, producing, as we all know, a weak, quick pulse, faintness and other well-known symptoms. We have seen weak pulses grow strong and steady and slow, after the action of mercury; and in any case of disease, in which the powers of the patient are to be severely tried, good will result, if we arouse the digestive organs from their sluggishness. Intestinal absorption of food, and the casting off of deleterious products, will be better accomplished. Perhaps

the benefit of the bichloride is as much owing to its powerful action upon the glands as to its germicide properties. I do not mean to urge the use of calomel or corrosive sublimate in every case—other means for keeping the assimilative and absorbent functions in good order may be better—but I do believe that we should use mercury promptly and in the onset of diphtheria, when the indications for its use are present. In a few words, we should recognize at once the indications. Under such conditions, the stimulation of the digestive organs resembles the touch of the whip to the jaded horse, when he has an unusually steep hill to climb. And what difference does it make practically whether the digestive apparatus is weakened by previous causes or by the disease itself? Let us fight the disease, but let us also look carefully to those organs through whose functions nature herself fights disease.

With regard to the removal of the diphtheritic product, authorities differ, a few still believing that a clean sweep with caustics is the one thing necessary, while others go to the extreme, and do almost nothing to the throat. Now, is it not safer for us to take the middle course? We believe in the removal of morbid products elsewhere, or, if this cannot be accomplished, we believe that the influences of septic matters ought to be counteracted. Does it follow that, because diphtheria is a constitutional disease, we should not free the throat of the decomposed solids and fluids with which it is sometimes filled? Certainly these are unnatural and injurious products. They must be absorbed into the system in one way or another, and they get into the stomach and compromise its functions, when good digestion is the one thing upon which we must depend for the supporting effects of food and tonics.

The functions of the lung also will be better performed if we see that the air which enters it is pure. It must be poisoned by passing over poison. Considering these facts, are not antisepsis and disinfection important measures in our treatment? Let us absorb the false membrane, if we can, with remedies which have no irritant action. Let us realize also that disinfection must be used constantly. Remedies

for this purpose are not lasting in their effects. A persistent and frequent employment of them, in a manner best suited to individual cases, is necessary to produce the results for for which we are working. Dr. Smith, I think, argues well when he lays so much stress upon these measures.

Intubation is now prominently before the minds of the profession, and is being thoroughly tested. The reports so far have not been sufficiently numerous to justify fixed conclusions, but I shall refer to two articles from which some idea of results can be obtained. Dr. Northrup, in the *N. Y. Med. Journal* (Sept. 18th, 1886), heads his paper, "Intubation of the Larynx for Croup (O'Dwyer's method)." Eight cases are given. To quote from this report: Of nine patients operated on, four recovered. Of the four who recovered, all had diphtheritic exudate in the pharynx; all were suffering from laryngeal stenosis; all had these symptoms: restlessness, recessions, absence of vesicular breathing behind, and albuminuria. Each patient was examined by two physicians, most of them by more than two, and one by six physicians. Of those who died, two died of extension of the exudate into the finer bronchi—bronchial diphtheria—but died before pneumonia had developed. One developed well marked pneumonia. One died of sudden heart failure. One died of malignant diphtheria. Such are the comments. In these cases the insertion of the tube was followed by relief—in nearly every case immediate—from the urgent symptoms, the child dropping into a calm sleep, and the natural lung sounds being restored, except, of course, when pneumonia was present. It is worthy of notice that the tube was found clear in the cases that died, and that the presence of the tube is not supposed to produce serious laryngeal spasm.

In the *N. Y. Medical Journal* (Oct. 2d, 1886), Dr. Irwin H. Hance, Resident Physician of the Nursery and Child's Hospital, records five cases of croup in which intubation was used. One recovered. As a rule, prompt relief followed the introduction of the tube, and relief came sooner or later from the re-introduction of the tube, after having been coughed out on its first insertion. To quote from Dr. Hance's article: "I cannot fully account for the sudden and

complete stoppage of respiration as occurred in cases II and III. That the tube was partly clogged up was apparent, but it did not appear as though it was occluded with membrane. I believe that the respirations at first became embarrassed by an excess of secretion in the tube; then the tongue fell back, forcing the epiglottis over the fenestra of the tube. This belief is strengthened by the fact that the treatment which was resorted to afforded relief without the removal of the tube, for at each attack the tongue was depressed and forced forward, in order to clear out the mucus from the back of the throat. It is highly probable that both the excess of secretion and the falling back of the tongue acted conjointly in causing the cessation of respiration. In another case I shall try first to see what will be the result of simply pulling the tongue out of the mouth before using any other means of relief." It is claimed by the writer that the insertion of the tubes causes no shock; that they are instantaneously and easily inserted; that they produce no wound; that they cleanse themselves; that the inspired air is warm and moist; that there is no increased risk of lung complications; and that no after treatment is required. The disadvantages of tracheotomy are brought out by claiming for it, more or less, the opposite of what is said of intubation. I will add that, in one of the cases just mentioned, in which the tube was found in the stomach, the result is attributed to his leaving the thread in the eye of the tube. He thinks that when the tube was coughed up, the involuntary muscles of the pharynx and œsophagus caught the thread, and drew the tube into its final resting place.

Dr. Jos. A. White, of this city, informs me that he has used intubation in two cases, with a speedy relief of urgent symptoms. And the same gentleman stated that eighty cases of intubation, with twenty recoveries, had been reported by Dr. Waxham in a Chicago journal. This report, which I have not had the opportunity of seeing, is, as far as I know, the most complete which has been published, and must be well worthy of attention. There are several other reports which I regret not having seen. The advantages urged in favor of intubation have already been quoted from those

who have faithfully employed the measure; and I shall leave the merits of this plan of treatment to be discussed by those who are present. If what is claimed for it holds in the experience of a few more experimenters, tracheotomy in croup and diphtheria will soon become a rare surgical procedure for the relief of these diseases.

We are unwilling, of course, to lay aside those remedies of which experience has taught us the value. The physician, too, is better satisfied when he can give a good reason for what he is doing—a reason based upon results which have undoubtedly followed a certain course of treatment. We reason oftentimes from effect to cause. Can we explain why it is that iron, chlorate of potash, quinine and alcohol are beneficial in diphtheria? Of iron and alcohol it is needless to speak, for they sound their own praises—silently, but very emphatically. The same remark applies largely to quinine. I believe its efficacy to depend upon the manner in which it is employed. In large, depressing doses, or in small doses, when some idiosyncrasy forbidding its use is observed, the continued exhibition of the drug would be injurious; but in small doses, frequently repeated, it is not only an anti-zymotic agent, but an invaluable stimulant to the nervous system. In the depression—quite severe sometimes—which follows the sudden discontinuance of the use of tobacco, the supporting effects of quinine can be clearly seen. The indications for its use in diphtheria are practically the same. Some doubts have been expressed concerning the beneficial action of chlorate of potash. Or, if its efficacy is acknowledged, it is sometimes said that its action seems to be good, and we give it, therefore, but have no good reasons based upon its therapeutical effects. I believe that its virtues depend not only upon its oxidizing effect on the red blood corpuscles, but, in a great measure, upon the fact that it antagonizes the putrid matters in the alimentary canal, and enables the digestive organs so much the better to perform their duties. If these two reasons hold, chlorate of potash could not be well discarded from our list of remedies.

Of late attention has been called to the usefulness of oil of turpentine as a local remedy. It is so well known to

both the laity and profession that its virtues, highly vaunted in some trivial affections, have been underestimated in diphtheria. We are afraid, perhaps, of giving an humble servant too much honor. Dr. John G. Skelton, of this city, whose experience in diphtheria has been long and extensive, is confident that oil of turpentine is a valuable agent in the treatment of the inflammatory affections of the pharynx and tonsils. He has used it in diphtheria, relying almost exclusively upon it as a topical remedy, and, after many years of practice, sees no reason to change his early views regarding its usefulness.

Lime water holds a high place as a cleansing astringent and absorbing local remedy, while, of course, the different well-known disinfectants and antiseptics are useful as circumstances require.

The new measures are being faithfully tried, and there can be no doubt that we are making valuable contributions to our means of relief. We must not expect to find the same remedy suitable to all cases; but from the well-known list of tonics, antiseptics, disinfectants, and absorbents, we must choose, as best we can, those which are adapted to the peculiarities of constitution and of the disease. It is often impossible to select, upon theoretical grounds, the remedies to which this or that form of diphtheria will most readily yield. The true physician, however, is he who first recognizes the requirements of individual cases. Positivism, as regards diagnosis and treatment, cannot be claimed at present; and my object has been attained if I have recalled to your minds what is now being done and what we hope will be done in the future.

Analyses, Selections, etc.

The Painless Production of Local Anæsthesia, and Its Applicability in the Treatment of Certain Painful Nervous Affections—A New Method.

Dr. J. Leonard Corning, of New York, who has already done so much in the way of practical invention, discovery

and suggestion, again comes to the front (*N. Y. Med. Jour.*, Nov. 6th, 1886) in an article with the above caption, which we copy entire, omitting the three wood cuts.

The desire to produce a condition of local anæsthesia in a part, which has been rife among surgeons for many years, has finally been realized, as the copious literature of the last fifteen months abundantly demonstrates. With an eye to the evident applicability of local anæsthesia in the treatment of a variety of painful nervous conditions, the author of this paper has conducted and published the results of a large number of experiments showing the applicability of the principles of local anæsthesia to the fine ramifications of the sensory nerves to the integument, to the large nerve-trunks, and finally to the sensory tracts of the spinal cord itself. The practically universal expression of approval which these contributions have evoked from the profession in this country and abroad has been a source of gratification no less than surprise to the author of this paper. Originally conducted with a view to a strictly neurological application, these researches have been extensively applied to the useful ends of surgery. All this is gratifying. It is not my intention on the present occasion, however, to recapitulate what has now become a part of medical history; I propose rather to go forward.

To come to the point, it is well known that local anæsthesia as heretofore practiced has been unavoidably associated with a certain degree of pain, owing to the necessity of introducing the anæsthetic into and below the skin by means of the hypodermic needle. In order to overcome this difficulty, an attempt has recently been made to introduce the anæsthetic into the skin by means of electricity. Thus, Wagner moistened the anode with a five-per-cent. solution of cocaine and placed the cathode over an indifferent point, regarding the position of the latter as immaterial. After applying the galvanic current for four or five minutes, he affirms that he was able to produce anæsthesia on the flexor side of the upper arm. Similar experiments have also been conducted by others. As for myself, I have carefully repeated these experiments, but have been unable to obtain more than a superficial anæsthesia. Now, it is a well-known fact that if a membrane is placed between the poles of a battery, as above described, it is possible to cause a fluid to penetrate the same (from the anode to the cathode) by the action of the current. This is one of the well-known axioms of electro-physics. But to conclude from this that it is pos-

sible, without the introduction of some favorable circumstance, to induce a fluid to penetrate in this manner a structure (the skin) a hundred-fold more dense than the ordinary membrane found in the physical laboratory, seems, to say the least, highly improbable. These considerations, coupled with my own failure to reproduce phenomena of the same intensity as those described by Wagner, aroused in me the conviction that success was alone to be found in some

Method of increasing the Porosity of the Skin.—After much reflection, I bethought myself of the following method: I procured an implement resembling the well-known instrument of Baunscheidt, but provided with many more fine needles than the conventional instrument of the shops. As in the Baunscheidt arrangement, this instrument is so constructed that, by releasing a spring, it is possible to thrust all the needles (about one hundred and fifty in number) into or through the integument, and, what is of paramount importance, *such perforationis* accomplished absolutely without pain. Now as to the method:

1. I first exsanguinate the part to be anæsthetized with an Esmarch bandage. I now apply a tourniquet above the bandage, and the latter is then removed. It is clear, therefore, that the whole district situated below the tourniquet, and which includes the territory which it is desired should be rendered anæsthetic, is bloodless. Now, by means of the implement above described, I perforate the skin thoroughly throughout the entire zone which I desire to render anæsthetic. *This is accomplished without the slightest pain*, as already intimated. Owing to the exsanguinated condition of the part, these minute openings remain open somewhat as in a dead person. This seive-like appearance of the skin is seen through a powerful lens. An oblong sponge electrode, saturated with a two-and-a-half-per-cent solution, is now secured over the perforated portion of the integument by means of an elastic strap. This electrode is connected with the positive pole of a galvanic battery, while the cathode is placed opposite the same (on the other side of the limb) or some indifferent point. If, now, the plates of the battery are immersed and the current is gradually increased until there is a slight but well marked sensation of warmth, the anæsthetic begins to exert its influence at once, so that in the course of from two to four minutes there is produced a condition of anæsthesia which enables one to thrust needles into the part to considerable depths without provoking pain. It is evident that where such a condition of things prevails

in the integument the structures lying beneath may be readily anæsthetized, if one so desires, to any extent and *without pain*, by the use of the hypodermic syringe, or by thrusting the needles a second time, still deeper.

I have employed this method recently to allay the hyperæsthesia which is such a troublesome feature of spinal irritation. I fancy, too, that it might render good service in certain obstinate conditions of tic douloureux, and I shall certainly try it in this and similar painful affections at the earliest convenient occasion.

Any one at all conversant with recent developments in neuro-therapeutics will perceive that this method offers possibilities of practical advancement.

2. I would add that I have induced painless perforation and anæsthetization by means of the galvanism without previous exsanguination, and have found the results in all respects gratifying.

3. A third method of producing cutaneous anæsthesia by means of the electric current combined with painless multiple puncture of the skin and the use of cocaine, which I have found very successful, is as follows: (a) Perforate the skin, or at least the epidermis, with the instrument already described. (b) Place a bandage around the part, above the point of puncture, and draw the same sufficiently tight to interrupt the venous circulation, but not to such an extent as to interfere with the arterial circulation. This procedure will cause the blood to well up through the minute openings previously made in the skin. Now apply the positive electrode, saturated with a two or three-per-cent. solution of cocaine, over the perforated portion of the skin. The position of the cathode is immaterial. As before mentioned, the current should be strong enough to produce a feeling of warmth. After from two to five minutes the electrodes may be removed, and the skin beneath the positive electrode will be found to be completely anæsthetic. Where it is desirable to prolong the duration of the anæsthesia considerably, the part may now be exsanguinated and the tourniquet applied above the anæsthetic zone, so as to completely interrupt the circulation in veins and arteries alike.

The superiority of this method consists, of course, in its absolute painlessness; whether it will find a place in surgical operations or not remains for those who are interested in such matters to decide.

I would merely add that I have had constructed for me a reservoir electrode, which retains the anæsthetic, thus avoid-

ing the necessity of removing the electrode from the part in order to moisten the sponge.

Diagnosis of Infantile Diseases.

The *Boston Medical and Surgical Journal*, November 18th, quoting from the *London Medical Record*, October 15th, states that in a recent number of *L'Union Medicale du Canada*, Dr. Bradley gives the following summary of points on the diagnosis of disease in infants:

(1) Congestion of the cheeks, excepting in cases of cachexia and chronic disease, indicates *an inflammation or a febrile condition*.

(2) Congestion of the face, ears, and forehead of short duration, strabismus, with febrile reaction, oscillation of the iris, irregularity of the pupil, with falling of the upper lids, indicates *a cerebral affection*.

(3) A marked degree of emaciation, which progresses gradually, indicates some *sub-acute or chronic affection* of a grave character.

(4) Bulbar hypertrophy of the fingers and curving of the nails are signs of *interference in the normal functions of the circulatory apparatus*.

(5) Hypertrophy of the spongy portions of the bones indicates *rachitis*.

(6) The presence between the eyelids of a thick and purulent secretion from the Meibomian glands may indicate *great prostration of the general powers*.

(7) Passive congestion of the conjunctival vessels indicates *approaching death*.

(8) Long-continued lividity, as well as lividity produced by emotion and excitement, the respiration continuing normal, are indices of a *fault in the formation of the heart or the great vessels*.

(9) A temporary lividity indicates the existence of a *grave acute disease, especially of the respiratory organs*.

(10) The absence of tears in children four months old or more suggests a form of *disease which will usually be fatal*.

(11) Piercing and acute cries indicate a *severe cerebro-spinal trouble*.

(12) Irregular muscular movements, which are partly under control of the will when the patient is awake, indicate the existence of *chorea*.

(13) Contraction of the eye-brows, together with a turning of the head and eyes to avoid the light, is a sign of *cephalgia*.

(14) When the child holds his hand upon his head, or strives to rest the head upon the bosom of his mother or nurse, he may be suffering from *ear disease*.

(15) When the fingers are carried to the mouth, and there is, besides, great agitation present, there is probably some *abnormal condition of the larynx*.

(16) When the child turns his head constantly from one side to the other, there is a suggestion of some *obstruction in the larynx*.

(17) A hoarse and indistinct voice is suggestive of *laryngitis*.

(18) A feeble and plaintive voice indicates *trouble in the abdominal organs*.

(19) A slow and intermittent respiration, accompanied with sighs, suggests the presence of *cerebral disease*.

(20) If the respiration be intermittent, but accelerated, there is *capillary bronchitis*.

(21) If it be superficial and accelerated, there is some *inflammatory trouble of the larynx and trachea*.

(22) A strong and sonorous cough suggests *spasmodic croup*.

(23) A hoarse and rough cough is an indication of *true croup*.

(24) When the cough is clear and distinct, *bronchitis is suggested*.

(25) When the cough is suppressed and painful, it points toward *pneumonia and pleurisy*.

(26) A convulsive cough indicates *whooping-cough*.

(27) A dry and painless cough is sometimes noticed in the course of *typhoid and intermittent fever, in difficult dentition, or where worms are present*.

Rhubarb for Thread-Worms in Children.

A practical note on this subject is made in *The Practitioner*, October, 1886, by Sidney Martin, M. D., M. R. C. P., Fellow of University College, London. All physicians recognize that the complete cure of thread-worms in children is often very difficult. While the ordinary methods used, such as rectal injections of salt and water, infusion of quassia, and other remedies, do good for a time, yet they often fail to relieve the attendant symptom of "worms"—symptoms usually very irregular, and in some cases severe, in character. In many cases, though the irritation about the anus is relieved by injections, the irregularity of the bowels, and the disturbance of sleep, remain the same. This is probably due to the fact that the habitat of the worms is higher up in the large intestine, where no remedy introduced by the rectum

can reach them. In many cases Dr. Martin has found that rhubarb in small doses brings away large numbers of worms, and at the same time regulates the bowels; so that the use of injections may, in most cases, be dispensed with. The formula which he has found most useful is as follows, varying slightly with the age of the child:

R_y. Tincturæ rhei.....m ij
 Magnesii carbonatis.....gr. ij
 Tincturæ zingiberis.....m j
 Aquam.....ad ʒ j—Misce.

This is to be taken twice or three times daily, according to the effect on the bowels. Whether the rhubarb acts as a vermicide, or simply by "moving the worms on," he is unable to say.

Invariability of Pulse in Cardiac Hypertrophy, Pregnancy and Menstruation, Regardless of Posture.

We regret that the *Archives of Gynecology, etc.*, for October, 1886, does not give specific reference to the issue of the *St. Louis Medical and Chirurgical Journal*, which contains the following interesting statement, as we are always glad to give exact credit for borrowed items:

The fact that the pulse of the normal male beats from ten to fifteen strokes more per minute when the body is in a vertical position than when lying down, has long been recognized, and until a very recent period it was assumed that the same difference existed in the pulse of the female. Graves first pointed out that in cases of cardiac hypertrophy, the pulse remains constant in all positions. More recently, Jorissenne discovered that in pregnancy the same constancy exists in the female, and suggested this fact as a diagnostic test of that condition. *La France Medicale* now announces that M. P. Louge, internè of the Marseilles Hospital, has discovered that in women there exists during the menstrual flow the same constancy of pulse in all positions of the body. It is exceedingly difficult to account for this phenomenon by any known physiological law. Cardiac hypertrophy cannot be invoked, and the only hypothesis that I can suggest is that there is an augmentation of the tension of the blood during menstruation—a suggestion which seems to be supported by certain clinical phenomena of the catamenial period.

Arsenic in Hæmorrhagic Malarial Fever.

In the October number, 1886, of that newly established,

but deservedly successful journal—the *Alabama Medical and Surgical Journal*—Dr. Benj. H. Riggs, of Selma, Ala., states that in his town there have recently been “quite a number” of cases of hæmorrhagic malarial fever, and nearly all recovered. He refers to three cases which came under his observation—all white—which recovered *without any quinine whatever*; the main reliance was *arsenious acid*. He believes that arsenic arrests this blood-destroying process better than any other agent we have. In all of his cases, the hæmatine disappeared within twelve hours after beginning with arsenious acid, but the fever continued for some days in two of the cases, who were treated with an alkaline fever mixture and morphine hypodermically. The following is the formula he usually prescribes:

R \bar{y} . Acid arseniosi..... gr. $\frac{1}{4}$
 Piperinæ.....gr. ij.
 Pulv. Doveri.....gr. x
 Extract. hyoscyami.....gr v

Mix. Make five capsules.—Sig. One every three hours, according to age and other circumstances.

Of course, be careful to prevent arsenical poisoning.

The Editor of the *Virginia Medical Monthly* has several times called special attention to his greater success with arsenious acid or Fowler’s solution in the treatment of typho-malarial fever than with quinine, and has pointed out a seeming special “tolerance” of arsenical preparations in this almost nondescript form of fever.

Congenital Hereditary Atonic Dyspepsia.

Dr. R. Walker Beers, of Angola, La., in a late issue of *Medical Brief*, says that during a practice of twenty years he has prescribed Lactopeptine to patients of all ages, and has never been disappointed in its action when indicated. But he desires to speak in particular of its action in a case of congenital hereditary atonic dyspepsia. Mrs. H. L. S. Langside, Miss., was delivered of a male child in whom there was manifest marked atonic dyspepsia. The mother had dyspepsia from girlhood, and had inherited the malady from her mother. The infant was put to the breast a few hours after birth, and nursed readily; but almost immediately rejected the milk. Repeated trials resulted in vomiting, followed by exhaustion. Other articles of food were tried, including cow’s milk, etc., without improvement. The child was in great danger of starvation. On the third day he began the administration of lactopeptine. The effect was

immediate and almost miraculous. He ordered one-sixteenth of the adult dose to be dissolved in about two ounces of breast milk (drawn from a robust, healthy wet-nurse) and administered every two and a half hours. There was no more rejection of milk—except the usual vomiting of curdled milk, to relieve the crowded state of the stomach, which occurred occasionally after the first ten days. Condensed milk, cow's milk (properly diluted and sweetened), boiled bread (pap), were, after awhile, substituted for breast milk, but always with lactopeptine. A steady improvement was manifest from the beginning, and kept up during the first dentition, which process was gone through with in a most satisfactory manner. No untoward diarrhœa or intestinal disturbance characterized this period, and, at ten months, the child was virtually cured of its dyspepsia, and could eat and digest ordinary food such as children at that age may do in good health. The parents of the child believe firmly (as Dr. Beers does) that lactopeptine saved their infant.

In cholera infantum, diarrhœa, and the disturbances of the alimentary canal, during dentition and early infant life, lactopeptine is an ever-effective and reliable remedy. In adult dyspepsia, all are now familiar with its beneficial effects; but the profession should be induced to try it in the vomitings, diarrhœas and dyspepsia of infancy. Dr. B. recalls several babies whose lives he believes he could have saved, had he known, ten years ago, of the ready adaptibility of lactopeptine to infant ailments.

Ingluvin—Its Value, etc.

Almost weekly some new drug is brought to our notice, but in many instances, after trial, it is found either inferior to, or no better than, those which we already have, and its use is dispensed with. But it does sometimes happen that we are offered an article of such undoubted merit that it is warranted in taking rank with the *standard* articles of our *materia medica*. Such an article is ingluvin.* It is the essential principle of the gizzard, and bears the same relation to poultry that pepsin does to the higher animals.

A favorite prescription of Chinese physicians for chronic indigestion is to cut up and digest chicken gizzards in hot water until they are reduced to a pulp, and then add some spices. A tablespoonful or two of the resulting paste is taken at each meal, until the patient has entirely recovered.

* Inguvin is a refined substance, prepared from the ventriculus callosus gallinaeus, the gizzard of the domestic fowl, *gans domes icus*.

From China the practice passed to other parts of Asia, and was adopted here and there among the Mediterranean peoples. Strange to say, it was never learned by the great nations of Europe until the latter part of the present century.

The diseases in which the use of ingluvin is indicated are indigestion in its various forms, known as dyspepsia, and for sick stomach or nausea caused by debility of that organ. It was originally discovered to be a remedy—indeed, a specific—for vomiting in pregnancy; in this respect it stands above all other medicinal agents. In all that is here set forth, the manufacturers claim no more than is sustained by medical authority of the highest standard. In ingluvin, the physician has what might be called a specific for sickness which in many cases has hitherto been uncontrollable.

Ingluvin is a powder of a yellowish-grey color, and may be prescribed in the same manner, dose and combination as pepsin, three to ten grains. The pulverulent form is considered more desirable, and it can be administered either dry or in water, milk, or tea. In sickness of gestation, the dose may be increased to ten or twenty grains.

The following nice formula was used successfully for the vomiting of pregnancy by Dr. George F. Meeser, of this city:

R \bar{y} . Ingluvin.....3i
 Bismuth subnit.....3ss
 M. Div. in chart xii. Sig.—One every 3 hours.

Oxalate of cerium may be prescribed with it, one to three grains to each dose.

Dr. Shelly recommends the following formulæ for diarrhœa, cholera infantum, and marasmus:

R \bar{y} . Ingluvin.....gr. xij
 Sacch. lac.....gr. x
 Misce et fit. cht. No. x.
 Sig.—One every 4 hours, *for infants*.

R \bar{y} . Aquæ calcis.....f3ij
 Spts. lavand. comp.,
 Syr. rhei arom.....aa f3j
 Tr. opii.....gtt. x.
 Misce. Sig.—A teaspoonful every 2 to 4 hours,
for infants.

R \bar{y} . Ingluvin.....3j
 Morphixæ sulph.....gr. jss
 Misce et fit. cht. No. xii.
 Sig.—One every 4 to 6 hours, *for adults*.

R \bar{y} . Aquæ calcis.....	f3ijss
Spts. lavand. comp.....	f3ss
Syr. rhei arom.....	f3vj
Tr. opii.....	f3ss
Misce. Sig.—Dessertspoonful every 2 to 4 hours, or after each evacuation, <i>for adults</i> .	

The substance ingluvin without any combination has also yielded almost constantly satisfactory results.

Dr. Roberts Bartholow who probably stands to-day as the greatest authority on materia medica in this country, speaking of ingluvin, says: "Ingluvin has the remarkable property of arresting certain kinds of vomiting—notably, the *vomiting of pregnancy*. It is a stomachic tonic, and relieves *indigestion*, *flatulence*, and *dyspepsia*. The author's experience is confirmatory of the statements which have been put forth regarding the exceptional power of this agent to arrest the vomiting of pregnancy. It can be administered in inflammatory conditions of the mucous membrane, as it has no irritant effect. Under ordinary circumstances, and when the object of its administration is to promote the digestive function it should be administered after meals. When the object is to arrest the vomiting of pregnancy, it should be given before meals."—*Med. and Surg. Rep.*, Oct. 23.

Book Notices.

Paralysis; Cerebral, Bulbar and Spinal. By H. CARLTON BASTIAN, M. A., M. D., F. R. S., F. R. C. P., Examiner in Medicine at Royal College Physicians; Professor of Clinical Medicine and of Pathological Anatomy, University College, London; Physician to National Hospital for Paralyzed and Epileptic, etc. With numerous Illustrations. New York: D. Appleton & Co. 1886. Cloth. Demi 8vo. Price, \$4.50. (For sale by Messrs. West, Johnston & Co., Richmond).

This is "a manual of *diagnosis* for students and practitioners," and as a special work on the diagnosis or localization of a paralyzing lesion, we do not know of its equal in any language. The entire purpose of the author is to trace effect to cause—to recognize a chapter of symptoms and signs as pointing to a definite lesion—definite both as to character and location. Progress in neuro-pathology has been wonderfully rapid and wonderfully precise within the past quarter of a century; and the importance of an acquaint-

ance with the advances made therein must be recognized by every practitioner of medicine. The author of the book under notice has collected within the pages before us quite a full summary of the facts brought to light by careful research and experiment, and presents them in such a manner as to make them of special diagnostic value to the reader. We cannot refrain from expressing regret that distinctive sections relating to treatment have not been added. Anything like extended reference even to trephining is everywhere omitted. Such omissions will very much curtail the sale of the book, and thus many students and practitioners who need much more information than they have regarding brain and spinal lesions and their effects will never get it. It may be a misfortune, but it is nevertheless an every day recognized fact, that many physicians care little or nothing for a book which, devoting great attention to diagnosis, gives no therapeutic suggestion; whereas a work that combines the two becomes immediately *the* book that was wanted.

Surgery of the Pancreas as Based upon Experiments and Clinical Researches. By N. SENN, M. D., of Milwaukee, Wis.; Attending Surgeon to Milwaukee Hospital; Professor of Principles and Practice of Surgery, and of Clinical Surgery, College of Physicians and Surgeons, Chicago, Ill., etc. Paper. 8vo. Pp. 129. (From Author).

This monograph is "reprinted from the *Transactions* of the American Surgical Association, April 29th, 1886." It is an invaluable contribution, based, as the title indicates, "upon experiments and clinical researches." It opens with a section on the comparative anatomy of the pancreas, followed by a section on the development, and then a section on its physiology, which points out as the functions of the pancreatic juice, (1), emulsifying effect upon all kinds of fat, (2), its power to transform starch into sugar, and (3), its effect in converting (with the aid of the bile and intestinal juice) the albumoids into albuminose or peptones. Section IV, is taken up with the experiments on the pancreas, such as complete section, laceration, comminution, extirpation—complete and partial—obliteration of the pancreatic ducts the effects of external and internal pancreatic fistulæ, etc. Section V, begins the surgical part proper, and first considers wounds; then acute pancreatitis; then chronic interstitial pancreatitis or sclerosis of the pancreas; then gangrene; then abscess; then hæmorrhage of the pancreas; then pancreatic cysts; then pancreatic tumors due to hypertrophy, to sarcoma and to carcinoma; then tuberculosis of the organs;

then lipomatosis of the pancreas; and finally, lithiasis of pancreatic ducts. To make this surgical monograph the more perfect, the author summarizes as conclusions from his studies a tabulated statement of propositions which would be useful if transferred to one's text book on surgery. Diseases and injuries of the pancreas are rare, and the usual text books give but meagre and unsatisfactory descriptions of them. Hence the special value of this altogether reliable collation of facts regarding the organ, and the importance of the summarized conclusions. Our regret is that we do not know how our readers who are not members of the American Surgical Association are to get the book (as it does not seem to be for sale by any one), except by imposing their requests for copies upon the very generous author.

Treatise on the Practice of Medicine. By ROBERTS BARTHOLOW, M. A., M. D., LL. D., Professor of Materia Medica, General Therapeutics and Hygiene, Jefferson Medical College; formerly Professor of Theory and Practice of Medicine, Medical College of Ohio, etc. Sixth Edition, Revised and Enlarged. New York: D. Appleton & Co. 1886. Cloth. 8vo. Pp. 990. Price, \$5. (For sale by West, Johnston & Co., Richmond).

The author, on his title page, claims a title which, (perhaps due to the oversight of his numerous friends and admirers in Virginia) has not been voted him—Honorary Member of the Virginia State Medical Society. But he has done so much in the way of valuable contributions to different departments of medical science to entitle him to the honors of the profession, and indeed, has received so many evidences of their appreciation that it is an easily applied compliment to the Virginia Society that he, in his off-hand statement of some of the chief honors received, claims honorary membership with that body.

Whoever undertakes to examine the book before us critically must be reminded that it is intended to occupy the position of only one of three volumes of a work which is to cover the whole domain of special pathology and therapeutics. The volume on "materia medica and therapeutics" has appeared, and is favorably received everywhere as eminently authoritative, and practical in detail. The third volume on the "Principles of Medicine," is in preparation.

Dr. Bartholow's *Practice of Medicine* is a work which is compelled to be popular with students and practitioners, for the reason that, as a rule, it gives special prominence to symptomatology, diagnosis and therapeutics. These are the special points which the doctor desires to be informed upon

as he comes to the bed side. In fact, the inquiry is not half so much as it should be, "What is the matter with this patient?" as it is, "What must I do for him?" In practical therapeutic directions, this work surpasses any of the popular treatises on practice of the day. Hence it would form a very valuable addition to every doctor's reading library. Its excellent index, which is appended, makes the volume of greater value for the purposes of ready reference to a disease. This sixth edition has been carefully revised, and the matter introduced represents the advanced facts and accepted opinions of this day. We cordially commend this book.

Physiological, Pathological and Therapeutical Effects of Compressed Air. By ANDREW H. SMITH, M. D., Late Surgeon New York Bridge Co., (Caisson Work). Physician to Presbyterian Hospital, New York, etc. 1886. George S. Davis, Detroit, Mich. 12 mo. Pp. 112. Price, 25 cents. (From Publishers).

This issue of "The Physicians Leisure Library" is taken up in great part with a re-statement of the facts and opinions published by Dr. Smith years ago, when the "caisson disease" among workmen, employed in building the foundations of the pillars of the great New York bridge, was attracting so much professional attention. The chapter on the "therapeutics of compressed air"—the indications and contra-indications for its use—is a very practical one, and should be read by every one who has patients to whom the suggestion of treatment by compressed air has been made. We have before referred to the cheapness of this monthly issued leisure library, and to the good selection of monographs for publication.

Diseases of Digestion, Urinary and Generative Organs. By DR. HERMANN EICHHORST, Professor of Special Pathology and Therapeutics, and Director of the University Medical Clinic in Zurich. Illustrated by 106 fine Wood Engravings. Volume II of *Hand-Book of Practical Medicine*. Volume VI of Wood's Library for 1886. New York: William Wood & Company.

In brief, this is a useful book to practitioners desiring information regarding the classes of diseases named in the title—except that only diseases of the *male* generative organs are considered. A characteristic feature is the special prominence given to microscopic appearances of the various pathological products referred to under each section. Special attention is devoted throughout to the matters of diagnosis and thera-

peutics. A great portion of the book is devoted to intestinal and other worms.

Diseases of the Nerves, Muscles and Skin, being Vol. III of Dr. HERMANN EICHHORST'S *Hand-Book of Practical Medicine*, and Vol. X of "Wood's Library of Standard Medical Authors," 1886 (consisting of 12 vols., price, \$15.00). Sold only by subscription. New York: William Wood & Company.

We have heard regrets expressed on all hands that the Publishers do not consent to furnish such valuable works as the three volumes issued of this work in regular order. The irregular system adopted of publishing this "Library" has caused many who were subscribers to discontinue their orders. We wish we could persuade such to renew their subscriptions, and others who speak of dropping off not to do so. This "hand-book" alone is almost worth a year's subscription. The present volume is in keeping with the former two, and is well illustrated by wood-cuts. Our space allows us no room for descriptive comment; but we may add that the completed "Hand-book," with their indices makes a very useful work in every doctor's office.

Rheumatism: Its Nature, its Pathology, and its Successful Treatment. By T. J. MACLAGAN, M. D. Octavo. Pp. 285. Illustrated. Supplied only to subscribers for "Wood's Library of Standard Medical Authors" for 1886 (consisting of 12 vol., price, \$15.00), of which this is Vol. IX. New York: William Wood & Company.

The author of this book will be recognized on mention as the one who gave to the world the almost certain remedy for rheumatism—salicin. The chief of his prominent theories, in explanation of its peculiar advantage in rheumatism, is that, as set forth in the book before us, the disease is of malarial character. Beyond the virtues of salicin and agents of the salicyl series, he lays but little stress upon treatment. The work is apparently intended, for the most part, to reconcile the connection of causes and effects rather than simply to record clinical facts. We have been highly pleased with the book, and its perusal can result in nothing but good. It should be studied by all readers. Incidentally he discusses the origin and seat of fever, though he evidently intended to apply his remarks only to rheumatism.

Editorial.

Virginia State General Hospital.

Surely our printing office has a "devil" in it. In preparing notes of the proceedings of the recent session of the Medical Society of Virginia for our November number, if there was one item mentioned with more studied accuracy than another, it was the result of the discussion in reference to this long-felt need of Virginia—a *State General Hospital*. Over seven pages of manuscript report were omitted by the printers on page 578 of the November number, which should have come in immediately preceding the sentence reporting Dr. John Grammer's paper.

The following is the text of the report of the committee to whom was referred the consideration of the resolutions (recorded on page 573 of the November number):

"The committee appointed to take into consideration the establishment of a State General Hospital beg leave to report that it believes the establishment of such a hospital will be of very great benefit to the suffering poor in Virginia, and redound to the general interests of the profession throughout the State, and recommend:

First. That the above mentioned hospital be located in the city of Richmond.

Second. That the following named gentlemen—Drs. J. Herbert Claiborne (of Petersburg), George Ross (of Richmond), Herbert M. Nash (of Norfolk), Rawley W. Martin (of Chatham), and Benj. Blackford (of Lynchburg)—be appointed a committee to draft a suitable plan to be laid before the next session of the General Assembly of Virginia, and to take such steps as may be necessary to secure its passage."

The general resolution favoring a *State General Hospital* in Virginia was heartily and unanimously approved, but there was an equal division of the vote as to whether the proposed hospital should be located in Richmond or at one of the other places named by different speakers—Dr. Dabney and others urging Charlottesville, and Dr. Latham suggesting Lynchburg. Accordingly, it was voted that in the first recommendation of the Committee the words "the city of Richmond" be stricken out, and that the omission be left blank, leaving the determination as to location to be decided by the General Assembly of Virginia, when the measure is brought up for consideration by that body. But this

much is accomplished by the Society—the development of active interest on the part of the profession, looking to the establishment of a *State General Hospital* in Virginia, to be kept separate and distinct from any other State institution, just as is each of the insane asylums, each of the medical colleges, etc., and to have its independent Board of Visitors or Managers, and to be conducted for the *benefit of the people and the profession of the State at large*.

Thus we are encouraged to hope that this long-needed want of Virginia is to be supplied by the vote of the next General Assembly of the State. It will be a sad reflection upon the enterprising spirit and personal influence of Virginia doctors if they do not influence the incoming legislators to establish such a State institution—to be under the control of no party or clique in or out of the profession.

Courier-Review Call-Book.

This "Physician's Pocket Reference Book and Visiting List," arranged and prepared by Dr. E. M. Nelson, of St. Louis, is well designed as to matter and arrangement, but is too large for an ordinary coat pocket, and has also, throughout the call blanks, the misprint of "monthly" for *weekly*. A friend who has just tried it in his pocket, remarks that, for a small-statured man, it will serve the purpose of a "breast-protector." It has, however, several very excellent features. Its posological table is quite complete and accurate. The diagnostic table of eruptive fevers is very useful. The three pages given to treatment of poisoning will prove serviceable in the important hour of need. Other tables, etc., beside the calendar for 1887, are "number of drops in a fluid dram," "diet table for diabetics," "prediction of day of confinement," "comparison of thermometric scales," "decimal system of weights and measures," "table of equivalents," "doses of medicine for children," "formulæ and doses of hypodermic injections," "artificial respiration," "care of galvanic batteries," etc. Publishers: Messrs. J. H. Chambers & Co., St. Louis, Mo., Chicago, Ill., and Atlanta, Ga.

The Southwestern Medical Gazette

Is the title of a proposed 32-page, one dollar per annum monthly medical journal, to begin with the January issue, 1887, in Louisville, Ky., (423 W. Chestnut street), Drs. M. F. Coombs and J. B. Marvin, editors. We take pleasure in putting its address upon our exchange list, and in commending the enterprise to the patronage of our readers.

The Physician's Visiting List for 1886,

Published by Messrs. P. Blakiston, Son & Co., of Philadelphia, is ready. This is its 36th year of publication. It is convenient in size for the pocket, and contains calendars for 1887 and 1888, list of poisons and antidotes, dose tables according to last U. S. Pharmacopœia, Hall's method in asphyxia, list of new remedies, Sylvester's artificial respiration method (illustrated), diagram for diagnosis of chest diseases, explanation of metric system, new table for calculating utero-gestation, etc. Of the *new* features, we notice titles of disinfectants and disinfection, directions for examining urine, list of standard reference books, incompatibles, a cash account, etc. Its chief advantage is the size of the book, being $6\frac{1}{3} \times 3\frac{7}{8}$ inches and only $\frac{3}{8}$ to $\frac{1}{2}$ inch thick. See advertisement in this issue.

Guild of St. Luke, Evangelist and Physician, in U. S. of America.

We are requested to say that the object of the Guild is to promote and defend the Catholic faith, especially among the members of the medical profession, by frequent and regular communion, intercessory prayer, personal influence and example, and promotion of works of mercy. Physicians and medical students of the regular medical profession, who are communicants of the American Church Catholic, and bishops, priests and deacons of the church, are cordially invited to become members. The entrance fee is \$1.00, and the annual subscription 50 cents. Address W. Thornton Parker, M. D., Provost, Newport, R. I.

The Archives of Gynæcology, Obstetrics and Pædiatrics.

The series of 1886 just completed, has met with such warm encouragement, the publishers have decided to issue monthly; and commencing January, the parts will so appear, instead of bi-monthly as heretofore. Messrs. Leonard & Co., 141 Broadway, New York, publishers.

Dr. J. Taber Johnson's Article.

The article, as it appears in this issue, is as it was read before the Medical Society of Virginia in October. But just after we had gone to press, he forwarded an additional "case" and a few additional "remarks," which we regret reached us too late to come in this issue. Fortunately, however, the report of the additional case and the further "remarks" alluded to were received in time to be incorporated in the "reprints," which he had made of the very interesting and instructive article.

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Original Communications.

ART. I.—**Electricity in Post Partum Hæmorrhage.*** By ROBERT J. PRESTON, A. M., M. D., Abingdon, Va.

Of the many exigencies that a physician is called to meet in the role of accoucheur, none, I think, is more trying than severe post partum hæmorrhage. When this appalling catastrophe befalls the lying-in woman, with its sudden onset, with the life-blood pouring from the veins, rapidly blanching the countenance and paralyzing all the vital energies, the accoucheur in anxiety and fear eagerly grasps at any and every reliable means to quickly arrest the flow and ward off impending death. Most of us know the exigencies of such an hour, and with what boldness and often with what trepidation we must seize the helm and work for the life of our patient. The hope of adding something in the way of suggestion, or rather of calling attention to a remedy, is my apology for the few remarks herewith submitted.

In the first place, as inertia or flaccidity of the uterus is by far the preponderating cause, and as the great majority of remedies are directed to the removal of this one cause, we

* Read before the Medical Society of Virginia at its Seventeenth Annual Session, at Fredericksburg, Va., October 28, 1886.

shall limit ourselves to the consideration of this condition. Other causes contributing, such as laceration of the cervix, of the perineum, etc., when demanding attention from the severity of the hæmorrhage, require a different treatment.

What are the remedies usually resorted to in post partum hæmorrhage? In an excellent and exhaustive article on this subject, a few years ago, in the *American Journal of Obstetrics*, by our worthy Honorary Fellow Dr. George T. Harrison, of New York city, he says: "The therapeutical resources at our command which may be regarded as reliable may be reduced to four: 1st, Friction, kneading and compression of the uterus; 2d, Hypodermic injection of ergot above the symphysis pubis; 3d, Injection of hot water at a temperature of at least 100° F. into the uterine cavity; and 4th, The injection of Churchill's or the U. S. tincture of iodine into the uterus." Other writers recommend the introduction of lumps of ice into the uterine cavity, the injection of persulphate of iron, etc.

It is doubtless true that many cases of post partum hæmorrhage are, as has been said, brought about by a faulty management of the labor; but it is also true that with the best prophylactic treatment and the utmost care, this accident will sometimes come suddenly upon the accoucheur, and demand the promptest and most energetic action at his hands. Now what to do, and to do quickly, what means to use most efficiently, are the vital question in these cases. All or most of the above-mentioned remedies are efficient and reliable in many cases. But that there are cases when from the sudden and copious flow the nerve centres and vital energies are so paralyzed by the shock as that these remedies fail to act, have no time to act, or if they act sufficiently to cause contraction of the uterus it is only a feeble and temporary contraction, our experience and the experience of many abundantly testify.

The main object of most if not all remedies here suggested is to excite muscular contraction of the uterus, and thereby constrict or tie up the patulous orifices of the uterine sinuses. What quicker or more powerful excitant of muscular contraction have we than *electricity*? In depressed vital condi-

tions, when other remedies must fail, this agent cannot fail. As we all know, so long as molecular life exists in the tissues, muscular contraction will respond to a current of electricity.

It has been objected to this remedy (as also to other remedies) that it is not always at hand. But now that we have such excellent portable batteries, and as but a weak current is needed, how easy it is for the accoucheur, especially in those cases predisposed to post partum hæmorrhage (which we all meet with occasionally), always to have a small battery at hand ready for use. (Græfe's battery is an excellent and cheap one. With such at hand in these cases I confess to a feeling of confidence and security which nothing else gives to me.

Another advantage of this remedy is that while other remedies are transient in their excitant action upon the muscular coat of the uterus, and often depressing in their effect upon the system, this is constant in its action and tonic in its effect. A weak current of electricity can be kept up for hours, if necessary, through the uterus, thereby securing permanent contraction, while the nervous system is at the same time being toned up and strengthened by its action. Time and opportunity thus afforded in alarming cases for the administration of other stimulants and restoratives, may often tell quickly and favorably upon the issue of life and death, hanging as it were in the balance.

Another great advantage which I claim for this remedy—in these days when bacteria, bacilli, micrococci, etc., seem almost omnipresent, ready to enter through any available avenue and set up in the system septicæmia and other dreaded diseases—is that there need be no intra-uterine or intra-vaginal medication. One pole of the battery placed beneath the sacrum and the other above the symphysis pubis will insure a current directly through the uterus and cause immediate contraction, thereby expelling clots and other non-adherent extraneous matter more effectively than any other means.

It was my purpose to cite cases from my practice illustrative of this treatment, but my paper is sufficiently long and

I forbear. I have been induced to call attention to this remedy from the fact that so many writers and authors fail to mention it in the list of remedies for this accident, and none that I know give it the prominence which I think it deserves. If I can succeed in these few remarks, crudely and hastily gotten together, in securing a more extended trial of this remedy, and be the means of suggesting to some medical brother an efficient remedy in this trying emergency, which shall in his hands prove a benefit to his patient and help to avert a fatal catastrophe, as it has I think in mine, my purpose will be fully attained.

ART. II.—**Chloroform and Chloral in Childbirth.*** By H. M. CLARKSON, A. M., M. D., Haymarket, Va.

I claim for my subject, in the way of novelty, nothing; in the matter of importance, everything. We have the authority of wisdom for the proverb, "there is no new thing under the sun;" but the very commonness of a discussion is proof of its consequences. The old, old story of the "star in the east," which went before the wise men, until it stood over the stable in Bethlehem, has been told in every tongue, to listeners of every clime, and now, after the lapse of centuries, it has lost nothing of its original interest.

And so with my theme to-day. Call it hackneyed, if you like, but so long as chivalry suggests and Christianity appoints the proper position of woman in the world, so long will the question of anæsthesia in childbirth, rough shape it as we may, command, at least, a respectful hearing. And, when we remember what we owe to woman as mother and wife, and when we reflect how often is woman, through her love, wounded by the lust of man, we would, indeed, be less than men, did we not find this an all-absorbing subject.

Let the evolutionists laugh as they will at the Mosaic ver-

*Read before the Medical Society of Virginia during its Seventeenth Annual Session at Fredericksburg, Va., October 27th, 1886.

sion of Genesis; let the orthodox doctors of divinity dispute until doomsday the Darwinian hypothesis—the one thing upon which skeptic and believer agree, is that woman, in the wonderful complexity of her structure, whether regarded as the finishing work of an infinite Intellect, or as the highest resultant of a gradually progressing development, is the very climax of adaptedness to nature's ends, the crowning capstone of a marvelously complete system of animal organization. And whatever the law which called her into being, whatever the mould in which she was fashioned, she was, in the beginning, at least, physically faultless—beautiful in her contour, perfect in her proportions, her every organ faithfully performing its physiological function. Had she remained in this original perfectness, she would to-day be fulfilling her remarkable mission of reproduction with as little labor as any other mammiferous animal.

But, whether or not, we are to believe, as claimed, that the eating of the apple in Eden is only allegorical, we do know that, at some time, sin entered into the world, and that fashion, its handmaid, finding easy ingress, opened her Pandora's box of ills, and flooded the earth with her follies. Hence, following in their train, we find the constricted chest, the crooked spine, the hour-glass waist, the contracted pelvis, the vitiated secretion, the uterine obliquity, and hence the necessity for the obstetric art, the great battle axe of which is anæsthesia.

Do you call these prefatory remarks irrelevant? Not at all. I would have you view this question not only from a scientific, but from a moral, as well as from a common sense standpoint. I would touch, if I could, your tenderer nature. I would appeal to your sympathies, to your sense of responsibility, to your consciences in this matter. I hold that he who has the power to remove, or to mitigate pain, and neglects to use it, is as culpable as he who wittingly inflicts it. All honor, then to those who, in the spirit of the good Samaritan, indifferent to the whisperings of vanity, of avarice, or of ambition, religiously devote themselves to the relief of pain, for the sake of doing good, awaiting as their reward the Master's commendation, "inasmuch as ye have done it

unto one of the least of these * * * ye have done it unto me."

Anæsthesia in Labor Reviewed and Advocated.

And why not *we* be up and doing in this matter? Pain is the natural enemy of humanity. It is our mission to destroy it if we can. Then why hold truce with it? Why should a woman suffer, with a ready remedy in easy reach of her? Look at that primipara in the agonies of childbirth. With those tearful eyes upturned in prayer, and her helpless hands held out to you in supplication, can you hear unmoved the anguish of her cry—"For God's sake, doctor, can't you do something for me?" Because some canting religious crank, some such fanatic as the learned Hebrew professor, Dr. Mielziner, of the Cincinnati Medical College, has found it necessary to address on this subject, in a late number of the *American Israelite*, counsels you not to administer anæsthetics to the parturient woman, thwarting thus one of the decrees of God, are you going to listen to his twaddle? It is true that God said to the woman, "in sorrow thou shalt bring forth children;" but was it not He also who bade the poppy to bloom in her path, and the spurred rye to exude its juices for her? And has He not made you His agent and the chemist your ally, for the doing of good? And if some old granddame, well stricken in years, tells you that she had *her* son, John, and *her* Sarah Ann without taking any of that "dangerous stuff," are you going, for this reason, to withhold the great blessing? If so, then throw away your steam threshers and your self-binders, and beat out your grain with the old-fashioned flail of your grandfather, and, in the sweat of your brow, bind your sheaves with your hands. And, because parturition is a physiological process, do you propose to sit by and see your case resolve itself into abnormal labor, consoling yourself with the reflection that "meddlesome midwifery is bad?" Or, are you going to indulge your indolence in "waiting on nature," when nature is dissolving itself in tears, crying aloud with every contraction of fibre, and exuding an agony of sweat from every pore?

Chloroform in Labor.

Such, gentlemen, are some of the suggestions of Christianity and of common sense. And what says science? What is this potent nepenthe, this chalice of forgetfulness which we are offering to our sisters in the hour of their sorrow—this wondrous distilment, symbolized by the mystic characters C_2HCl_3 ? Nearly forty-two years ago Professor Simpson, of Edinburgh, introduced chloroform into the lying-in room, offering it to the parturient woman as an antidote to the pangs of childbirth. This was, on Nov. 8, 1847—five years after Dr. Crawford Long, of Athens, Ga., had used ether as an anæsthetic in surgery, and just one year after Wells, with his bag of laughing gas, and Morton, with his secret “letheon,” were advertising “a new era in tooth-pulling.” Simpson had, for the past ten months, been using ether in midwifery, and with the true spirit of a philosopher, had himself been inhaling different gaseous compounds, hoping to find something more perfect, speedy and agreeable, and yet more transient. The result was that he substituted chloroform for sulphuric ether as a more manageable anæsthetic. But there were giants in those days, in the arena of obstetrics, such as Ramsbotham, of London, Athill, of Dublin, and Meigs and Hodge, of Philadelphia, who were in league against the innovations of the Edinburgh professor; and no great medical discoverer, not even immortal Jenner, seemed so beset as Simpson. But right chivalrously has he championed the cause of woman, and never sovereign knighted nobler gentleman than when, nineteen years later, Victoria dubbed him Baronet. The sturdy blows which he dealt in defence of his faith are felt to-day, and the use of chloroform in midwifery is still steadily working its way into professional and into popular favor. And yet it is amazing how many medical men neglect to use it as much as they should. Those of us who were privileged to hear the discussion of a paper on this subject, read by Dr. J. Herbert Claiborne, of Virginia, in the Obstetrical Section of the American Medical Association, in 1884, will, perhaps, remember how many delegates were either positively opposed to it, or were indifferent to its use. And for what reasons?

I shall only refer to some of the more common objections. Years ago, Dr. Athill, of Dublin, suggested the possible danger of post-partum hæmorrhage from its use, and many have been blindly dreading such a result ever since. I do not quarrel with his theory, for it seems rational that *extreme* anæsthesia should relax nervous and muscular energy, and thus possibly contribute to hæmorrhage. But what is the teaching of experience? For one, I am certain that I have encountered hæmorrhage quite as often when chloroform has not been administered as when it has been given freely. Some, too, are yet holding to the belief that in surgery less blood is lost by the use of chloroform than by the omission of it. I do not assert this, but if it be so, then why not so in obstetrics? But is not this whole subject of *post partum* hæmorrhage very much of a bug-bear? It certainly does not occur often, and is very controllable under the latest teachings on the subject. Besides, the advice of the Latin poet, "*medio tutissimus ibis*," should ever be remembered as a maxim in midwifery, and I do believe that, moderately and carefully used, chloroform becomes a uterine regulator, converting irregular and inefficient pains into regular and efficient contractions—a condition least conducive to hæmorrhage.

Another complaint against chloroform in midwifery, maintained formerly by both Ramsbotham and Meigs, is that it conduces in parturition to the hysterical as well as to the eclamptic seizure. But this is altogether fanciful. Chloroform quiets hysterics, and is our sheet-anchor of safety in the dire complication of eclampsia.

The old charge against chloroform, that it is dangerous to the child *in utero*, is never made now, I believe, except by the ignorant. At the same time every intelligent obstetrician recognizes the fact that its relaxing and dilating effects materially conduce to the child's safety *in transitu*.

There are many who claim that the pains of parturition need not be relieved, on the ground that they are not pathological, but purely physiological in character. But is this strictly correct? It is not deniable that in our high degree of civilization and the very artificial condition of our society,

the pains of parturition partake very much of a pathological nature, and that the line of demarkation, here, between physiology and pathology is exceedingly shadowy and indefinable. But how easy to reduce this doctrine to absurdity! For, if for this reason, nothing is to be done for the relief of dystocia, then, when digestion becomes dyspepsia and defecation runs into dysentery, for a like reason, no effort should be made to relieve the painfulness of these affections. Could anything be more ridiculous?

But the most common as well as most important objection made against the administration of chloroform in obstetrics is the danger to the life of the mother—the possibility of death by asphyxia, or by syncope. But what are the facts? We find chloroform administered in dentistry, in surgery and in obstetrics. No one denies the danger of it in dental practice—our daily papers often containing accounts of death in the dentist's chair. And this is not remarkable, when we consider that the position of the patient is upright, that the hand and the instruments of the operator more or less blockade the entrance to the air passages, and that blood is frequently filling the cavity of the mouth. In surgery, too, it is comparatively hazardous—not even the strictest care preventing death occasionally. We have all heard of the unfortunate, and apparently unavoidable, fatal accidents, under the care of two of our most skillful and painstaking surgeons of the South, and last year European surgery pleaded guilty to a dozen deaths from this cause. But in obstetrics how is it? I might say that, if carefully used *in midwifery, chloroform is absolutely safe*. Who of us here has lost a patient from this cause? Who of us can put his finger on a well authenticated instance in the literature of this subject? Not one; and why? Well, to illustrate:

The distinguished French surgeon, the late Nélaton, had a little son, now also a surgeon of note, who frequently amused himself in his father's office, by trapping for mice. On making a catch, he would produce anæsthesia in the little animal, and lay him out as if dead. He would then hold him up by the tail, head downwards, when gradually the little feet would begin to paw the air, the heart would be felt to

palpitate, and on putting him on the floor, the now resuscitated animal would run to his hole. The elder Nélaton, occasionally contemplating the scene, saw in it something more than childish sport. This he communicated to his friend, Marion Sims, then resident in the French capital. The two great men put their heads together, and determined to try the little Nélaton's method of resuscitation, should they ever have the misfortune to encounter a case of chloroform narcosis. They did not have long to wait. Very soon after this, the surgeon and the gynæcologist are in consultation. A lady of rank lies upon the table under the influence of chloroform, and Nélaton is performing upon her person a hazardous operation. Suddenly one of the medical assistants present, feeling for her pulse and failing to find it, exclaims, "She is dead." The face is livid, respiration has apparently ceased, and the heart seems no longer to act. "Let us turn her up," says Nélaton to Sims, and a stout assistant lifts her up, not exactly as the little Nélaton did the mouse, but by seizing her by the ankles and suspending her, head downward, over his back, while he stands upon the seat of a strong chair. Presently a tinge of color travels over her cheek, a sigh issues from her reddening lips, respiration is re-established, and again she is let down upon the operating-table. The anæsthetic is a second time given her, and the operation is re-commenced, when the faithful guardian of the pulse again announces danger. "Lift her up," cries Sims, and the strong man again throws her across his back, which revives her as before. And yet one time more is the operation continued, but the lady is again seemingly sinking into the arms of death, and is for the third time resuscitated by the upside-down position. The operation is concluded. The experiment of resuscitation has been successful, and "Nélaton's method," as practiced afterwards by Sims, becomes surgical history.

And now for the application to our subject. We cannot conveniently put our puerperal patient heels over head, but we can place her horizontally, with the head even lower than the heart, if we like; and we can even elevate the foot of the bedstead, if necessary, as a preventive either of syncope or

of hæmorrhage. Loosen her collar, if tight; have nothing tied around her waist, and her garters may also be removed. Fold up her handkerchief like a cornucopia, and pour into the hollow a little chloroform—that is, if the time has arrived for the administration of the anæsthetic, which should be just as soon as the pains are worrying, or are being borne with difficulty. Put a small quantity at a time on the cloth, and hold it about one-half inch from the mouth and nostrils, increasing this distance, if annoying at first, until she becomes somewhat accustomed to it. Keep your eye on the clock, and your finger occasionally on the pulse. Under the chloroform, the pains will become more and more regularly rhythmical. In this way you may learn the length of interval between the pains, and you will be enabled to anticipate them. Or apply the handkerchief when the patient writhes or begins to moan. You may even let her hold it herself. It will be grateful to her to have something to do, and as she goes under the influence of the anæsthetic the cloth will fall away from her face. Do this, and she will not ask for profound narcotism. Do this, and she will go to the end of labor calmly and safely, with no noise and without pain. And when she is going to have her next baby you will be summoned, and she will also persuade that young married couple next door to engage your services.

I believe it was the late Dr. George B. Wood, who, speaking of the comparative danger of chloroform in obstetrics and in surgery, suggested that “in the former it is given to relieve pain, but in the latter to prevent it,” making the presence of pain a preventive of danger, “by resisting the depressing influence of chloroform on the organic functions.” Very good, but there is a plainer and a better reason. At the very time that you are administering the anæsthetic most freely, that is, during the increment of pain, at that very moment the contracting of the uterus is driving blood back upon the brain—a forcing pump refilling the cranium, should your chloroform be removing the blood too rapidly from it. During the pain, watch the gradually reddening face, denoting a condition the reverse of that of syncope, and you will admire the automatic working of this wonderful

machine. In a nutshell, it is this: Chloroform kills, usually, by draining the blood from the encephalon; in parturition, uterine contraction effectually restores it. Hence, I believe you can scarcely destroy life by chloroform in childbirth, unless it be your aim to do so.

After all, the best practical test of this matter is the verdict of the beneficiaries. Our ex-president, Dr. J. H. Claiborne, Sr., tells of an old lady who, having borne sixteen children without the aid of chloroform, and having used it in her seventeenth confinement, under his administration, was so delighted with it that she declared her intention of having still another baby, because it was "so good to have them with chloroform." And seriously, if all who have experienced its benefits were to contribute each a stone for the erection of a statue to the man who first used chloroform in childbirth, the memorial shaft to Simpson would tower so high that the lately capped Washington Monument in comparison would sink into insignificance.

Desiring to be brief, I will not take time to say anything of the use of this article in the diseases complicating childbirth, or in instrumental or operative midwifery. So much then for chloroform.

Chloral Hydrate in Labor.

And what shall I say of its great congener, the *hydrate of chloral* (C_2HOCl_2)? I do not pretend to know much of its *modus operandi*, nor do I know whether or not the theory of Liebrich, disputed by Richardson of London, is correct, that this article is changed, by the alkaline reaction of the blood, into chloroform; but there is one thing I do know, and that from abundant experience—I do know that, next to chloroform, chloral is the best friend of the puerperal woman. Well do I remember the first time I ever used it. It was in the case of a young and pretty primipara, about to be a mother, without having been a wife. It was the oft told story of trust and betrayal. She was moody, willful, peevish and hysterical. She had been in labor nearly twelve hours. I found the os tincæ tender and hot, feather-edged and sensitive, with little or no dilatation, and apparently undilatable.

I dissolved twenty grains of chloral hydrate with two scruples of bromide of potassa, in an ounce of water. I gave her a tablespoonful immediately, and directed the remainder to be given in a couple of hours. Being broken down with fatigue, I went to sleep myself. At the end of the two hours I awoke, and found her calm and amiable. I gave her the second dose. In an hour later the os was largely dilated, and had not an objectionable feature, and before another hour the labor was completed.

Whatever part other anæsthetics may perform in the future in the "divine art of obstetrics," the hydrate of chloral will never take but high rank. It stands now second to none in diseases connected with childbirth. In puerperal eclampsia, in every phase of it, whether hysterical, epileptic, or uræmic, it is without an equal. Chouppé, of France, speaks of it as "the most reliable of all remedies;" Hugh Thomas, of England, as "*the sine qua non*;" Wm. B. Atkinson, of Philadelphia, as "almost a specific" in this disease; and Næggerath, of New York, and others claim it as antidotal to the albuminuria of pregnancy. In childbirth, in doses of from ten to twenty grains, for allaying nervousness and anxiety, for producing rest and slumber in the interval of pain, for relieving headache, for regulating so-called "false pains," for strengthening inefficient pains, for opening a rebellious os, for hastening dilatation in after pains—especially if combined with potassium bromide, I find it always apparently magical in its action. Schröder thinks it difficult to praise it too highly in all "tardy and exhaustive labors." Dr. Atkinson (and I quote him again because he is authority) regards it as highly reprehensible to allow a woman to suffer from any of these causes when we can procure such happy results from positive doses of this anæsthetic.

Guided then, gentlemen, by common sense, by science and by religion, armed with these two powerful weapons, we can engage in the noble cause of giving relief to suffering woman with the courage of conquerors, assured at least of the plaudits of our own consciences, and cheered by the conviction that "to pity distress is but human; to relieve it is godlike."

ART. III.—**Report of One Hundred and Twelve Cases of Obstetrics, with Observations on the Use of Chloroform in Labor.** By G. T. VAUGHAN, M. D., Farmville, Va.

Having kept notes of 112 cases of obstetrics, occurring in my practice among a class of healthy people, living in Piedmont Virginia, in the counties of Amherst and Nelson, for the most part farmers' wives, in good circumstances, who have suffered neither the privation of extreme poverty nor the enervating influences of wealth, and thinking that it might not be uninteresting to the profession, I have decided to publish a *resumé* of the histories of some of the cases, with a table showing the number of normal labors, number of twins, mortality, etc.:

Number of cases attended.....	112
“ “ white women.....	91 or 81.25 per cent.
“ “ colored “	21 or 18.75 “

Total 112

Number of children.....	116
“ “ pairs of twins..	4 or 3.57 per cent.
“ “ normal labors.....	105 or 93.75 “
“ requiring assistance, manual or instru- mental.....	7 or 6.25 “

Total children..... 116

Number of male children.....	63 or 54	per cent.
“ “ female “	53 or 46	“

Total..... 116

“ in which chloroform was used.....	45 or 40	“
“ resulting in death to mother.....	00	
“ “ still births.....	10 or 8.6	“
“ “ “ when chlo- form was used.....	2 or 20	“

Number of vertex presentations,	109 or 97.3	per cent.
“ “ breech presentations,	3 or 2.7	“
“ “ cases of puerperal convulsions.....	1 or .89	“
“ “ cases of placenta pre- via.....	1 or .89	“
“ “ cases of phlegmasia albadolens.....	1 or .89	“
“ “ cases puerperal fever or septicæmia.....	00	
“ “ children born with membranes intact or unruptured.....	3 or 2.7	“

Of the seven cases requiring assistance, *Case No. 1* was a primipara, and had a knee presentation, in which one knee was born and the other was arrested at the brim of the pelvis. No difficulty was experienced in releasing the knee and delivering the child, which was dead.

Case No. 2 was one of placenta presentation—a multipara in her fourth childbed. She suffered with pains and slight bleeding for about ten days before the labor, and when it began in earnest, the hæmorrhage became alarming. On examination, the placenta was found attached over the internal os, so that the presenting part could not well be recognized *per vaginam*, but by palpation through the abdominal walls the head was found presenting. The patient was put under the influence of chloroform, the fingers inserted, and the placenta separated from the uterine walls, until the edge was reached, when the membranes were ruptured, causing the head to descend and act as a tampon, thus checking the hæmorrhage. The pains continued, and in a short time the child was born dead—death being caused, probably, by the extensive detachment of the placenta, necessary to accomplish delivery. The mother recovered without further trouble.

Case No. 3 was a colored multipara in labor with twins. The first, a vertex presentation, was easily delivered, but the second was delayed, and on examination, one knee was found presenting, while the other was arrested against the brim of the pelvis, as in case No. 1. This was brought

down, and delivery effected without difficulty, the child being dead.

Case No. 4 was a primipara between 35 and 40 years of age, in labor with twins. The first head presented in the third position of vertex, with the occiput to the rear; and after engaging in the cavity of the pelvis, its progress was arrested. After waiting a reasonable time, and the head still making no progress, chloroform was administered and delivery effected with the forceps. The second head appeared lying in the transverse diameter of the pelvic cavity, and unable to advance, owing apparently to its inability to rotate. This was accomplished by means of the vectis, and the labor terminated without further trouble. The perineum being slightly lacerated, two stitches were immediately taken, and union followed in a short time. Both mother and children progressed favorably.

Case 5, a primipara in convulsions, which began with the labor. She had had three convulsions before my arrival, and was completely unconscious. The os uteri was found dilating well, but the convulsions continuing, in spite of chloral and chloroform, and the labor not progressing satisfactorily, it was deemed best to apply the forceps and deliver. This was accordingly done, the woman being fully under the influence of chloroform, and a large male child was delivered, the head in the fourth position, occiput to the rear. After delivery, the woman had three slight convulsions, but made a good recovery. The child also lived. The urine, on examination, was found loaded with albumen, and a history was obtained of trouble with the kidneys before confinement, such as œdema, headache and neuralgia.

Case No. 6 was a multipara in tedious labor, vertex presentation. From the symptoms, the child was thought to be dead; so chloroform was given, podalic version performed, and a dead child was delivered.

Case No. 7 was a colored woman, multipara. There was no difficulty about the delivery of the child, but the placenta was adherent just above the internal os, on the left side, and was with difficulty peeled off with the fingers.

Of the four cases of twins, two were white women and

two were colored; and in only one case were both the children of the same sex—in every one of the other three cases both sexes were represented in the children born. In three cases, the children were born with the membranes intact. In the first of these cases, the birth occurred about the seventh month of gestation: the child had been dead some time, and was macerated. In the second, the child was probably between seven and eight months of intra-uterine age, small and weak, but it survived. The third was at full term, and was quite unusual; the mother experienced a sharp pain soon after the labor commenced, and six hours after,*the child was born dead. On rupturing the membranes, the cord, which was longer than usual, was found tied in a knot, as if (as must have been the case) the child had dropped through a loop of the cord while *in utero*. The mother felt unmistakable movements of the child up to the time of the sharp pain referred to, but none after that.

In forty-five of the one hundred and twelve labors, chloroform was used to mitigate the pains, and of the cases in which it was used there were two still births. viz., cases No. 2 and 6 of cases requiring assistance, but in neither of these cases could the death be attributed to chloroform.

In regard to the use of chloroform in labor, I would say that, while the works on midwifery usually, I believe, approve it, yet I have found many able practitioners opposed to it. From my own limited experience, I am disposed to regard it as a remedy of inestimable value to all child-bearing women. When the anæsthetic properties of chloroform were first revealed, it was considered one of the greatest blessings that had ever been bestowed on the human race for its use in surgical cases alone. How much greater must our appreciation be, when we think of the relief it can give to every woman who has to suffer the agonizing pains of labor? Chloral hydrate and ether have been used for this purpose, but the one is of uncertain action, and the other is slow and apt to produce nausea, while both are much inferior to chloroform.

The only objections worthy of consideration advanced by

the opponents of chloroform are two, viz., (1), that it is liable to arrest the uterine contractions, and thus prolong the labor; and (2), that it increases the danger of *post partum* hæmorrhage. In reply, I would say that when given properly, I have never seen it produce either of these accidents. By giving it "properly," I mean that it should only be given during the pains, or when they are very severe, just a short time before they begin, and not to complete unconsciousness except during the last pains, when the foetal head, dilating the perinium, is about to be born. A little chloroform (say half a drachm of Squibb's) should be poured on a handkerchief, and when not in use the latter should be folded up, so as to prevent evaporation as much as possible; but when the pain begins, the handkerchief should be applied to the patient's nose until relief is experienced, or the pain passes off. I have not known it to arrest the uterine contractions even when given to complete insensibility, and think the danger of hæmorrhage is slight under the same circumstances. This effect is not surprising when we remember that chloroform affects by preference the striated muscular fibre—the voluntary system of muscles—rather than the non-striated or involuntary fibre, which is the kind found in the walls of the uterus and bloodvessels.

But admitting, for sake of argument, that the use of chloroform does predispose to hæmorrhage, the question then arises, Is the percentage of death from its use in labor any greater than the percentage of deaths from its use in surgical operations? This question should undoubtedly be answered in the negative. If so, then why should we refuse to assume the responsibility and allow the woman, if she so desires, to take the small risk attending the use of chloroform, inasmuch as the pain she often endures is tenfold in duration and intensity than that caused by many minor surgical procedures, or I might even say, greater than that caused by many of the capital operations, in which we never question the propriety of giving an anæsthetic?

As to the consideration of shock, that matter enters into both cases.

It seems a little inconsistent with our professions of es-

teem for the fair sex to give a strong man a remedy to keep *him* from feeling pain, while we deny it to a delicate, nervous *woman*, when, with proper precautions, the danger is less in her case.

ART. IV.—A Study of the Therapeutic Action of Wet Heat.*

By GEO. BYRD HARRISON, M. D., Washington, D. C.

Before presenting my paper, which may be entitled, “*A Study of the Action of Hot Water and Moist Heat in Therapeutics*”—especially in the treatment of such conditions as come within the purview of our Society—it may be well to state that I have chosen this subject, not with the idea that I can throw very much light upon it, but because I have long been impressed with its exceptional importance and with the unsatisfactory and unsystematic treatment it receives in the accepted text-books. Of our whole *Materia Medica*, there is probably not one agent of such universally acknowledged value which has been studied with as little care, or which is employed with as much of empiricism, as this one.

If I can only succeed in inducing others to supply what seems to me a real want; to so far investigate the *methodus medendi*, as that there may be established safe and definite principles for our guidance in the use of this agent in the thousand and one states to which it is remedially applicable, I shall be perfectly content with the imperfection (failure, it may be,) of my individual effort. There has really been (as far as my limited reading would indicate) so little written on the subject, and what has been contributed is of so vague and incongruous a nature, that he who undertakes this study has a “hard road to travel.” He has his edifice to build up, all but *de novo*. As for myself, without the aid of any carefully conducted experiments, original or recorded, I can do little more than merely theorize in reference to the physiology of the matter, and, therefore, must bespeak your indulgence and lenient criticism in advance.

We have thus far, in the life of our Society, been so

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highly favored in respect to essays and discussions; have been so richly fed upon the luxuries of our science that I have felt this little apology necessary before calling you to as homely a feast as the discussion of hot water.

It is my purpose to deal, in the following paper, only with the *external* uses of our agent, or rather with the effects of such uses; and, as a specimen of the widely variant views entertained of these effects, ask leave to quote from two admirable authorities of our day, who, much as doctors proverbially differ, might reasonably be expected to agree in reference to so elementary a matter as the action of a poultice. Not to detain you longer, in the words of Dr. Thos. A. Emmet, "A hot poultice is never applied with the object of increasing the congestion, but, as an old wife would express it, to draw the "fire" or inflammation out; in other words, to lessen the congestion by stimulating the blood-vessels to contract. That such is the effect from the prolonged use of a poultice is familiar to every one, and is well shown by the blanched and shriveled appearance of the tissues after its removal."

Au contraire, Messrs. Stille and Maisch use the following language: "Fomentations with warm water, by means of cloths, sponges, spongio-piline, *poultices*, etc., may be regarded as partial warm-baths," "and are used to relieve the tension of the skin in local phlegmonous inflammations, and at the same time *by increasing the amount of blood in the part to favor suppuration*;" nor will it do to explain these discrepant views on the ground that hot or warm applications are meant by the authors respectively, for a careful examination of the context does not seem to support such an explanation.

Moreover, if the following eloquent description of the effects of the general warm bath may be received, there would seem to be no distinction of *quality*, as between hot and warm applications similarly prolonged. I quote from Dr. Bartholow, who says: "The *degree* of effect which is produced by the immersion of the body in warm water is influenced by the temperature; but the *quality* of the effect is the same at all degrees from tepid to hot. The sense of warmth

is at first grateful to the feelings; the skin becomes red from increased activity of its vessels; the pulse quickens in beat, but diminishes in tension; the respiration is more frequent; præcordial oppression is experienced; an unpleasant sense of distension is felt in the head, and giddiness, faintness and muscular languor finally, are produced, if immersion be prolonged or the temperature be too high. The pulmonary and cutaneous transpiration are increased by the warm bath; the temperature of the body rises, and a condition is established by a hot bath, similar to the febrile state; rapid disintegration of tissue ensues, the waste products escape chiefly by the skin and mucous membrane, and decided loss of weight results."

If Dr. Emmet is right, however, a continuation of this process would result in a shrivelled washerwoman-like skin, and diminished superficial vascularity. And, certainly, the measures to which we habitually resort to intensify and keep up the *primary* dilatation of the cutaneous vessels, such as friction, the addition to the bath of irritants, as pepper, mustard, etc., would seem to favor his view of the matter. Indeed, his formulation of the phenomena resulting from the application of cold and heat, respectively, is most nearly in accord with the experience of the mass of observers.

"Cold," he says, "is a prompt excitator of reflex action, by which the vessels are made to contract; but, on reaction taking place, the parts will become more congested than before, both the arteries and veins being distended. Heat, unless at a temperature which would destroy the parts, does not act as promptly in causing this contraction as either electricity or cold. In fact, its immediate effect is to cause relaxation, and to increase the congestion of the parts; but, if its application be prolonged, reaction ensues and contraction takes place." Again, summing up, he says: "The immediate effect of cold upon the capillaries, therefore, is contraction, and with reaction comes dilation; but the reverse is true of heat, which causes at first dilation, followed by contraction."

The eminent doctor ought surely to have said *wet* heat for no one has ever seen a cheek blanched by sitting con-

stantly before a fire, however much it might become so with prolonged poulticing; and it would seem a hopeless undertaking to attempt restraint of hæmorrhage by dry heat in any of its forms. And here the physiological question presents itself: What is the nature of this primary dilatation due to the application of wet heat? and of the reaction therefrom?

You will, I know, pardon me, if, in order to illustrate my ideas on this subject, I review a little of our text-book philosophy.

We are all aware that the contractile elements of the arterial coats respond to two distinct forms of nerve impulse, one dilator (so called "inhibitory"); the other tonic ("constrictor"). Upon the delicate counterpoise of these two antagonistic forces the calibre of the arteries depends, but are supposed to be of central source, although facts are not wanting to indicate a certain degree of local independence; (*e. g.* when an area has been cut off from central control by section of the nerve-trunk containing the vaso-motor fibres distributed to its vessels, it has been found that, after a time, without renewed association with the centres, local stimulation will produce dilatation or constriction, as before.)

The impressions leading to these *centrifugal* dilator or constrictor impulses must, of course, occur in one of three ways, viz.: they must be conveyed to the centres by afferent nerves; they must originate in the cerebro-spinal system itself; or they must be produced by changes in the nervous centres. Heidenpain has made the broad assertion that "reflex vaso-motor action, in respect to cutaneous arteries, is, at all events when caused by artificial stimulation, always in the direction of dilation." (Foster.) This statement is quite sweeping; but the dilatation resulting from the application of wet heat (or, indeed, of any sort of heat,) may fairly be taken as an example of the general correctness of his rule or law.

The idea that dilatation is a merely passing phenomenon, resulting from diminished *tonus*, has long since been negatived. Michael Foster puts and answers the question in the following language: "Is dilation merely the consequence

of the diminution, partial or complete, of what we may call "central tonicity," *i. e.* of constrictive impulses proceeding from the central nervous system; or may it occur as the direct result of the stimulation of dilator fibres? There is no difficulty in answering this question in favor of the latter view. In such cases as those of the *chorda tympani* and *nervi erigentes*, stimulation of the peripheral portion of the nerve brings about a dilation far exceeding that resulting from simple section. Certain experiments upon the sciatic of the kitten, made first by Schiff, and afterwards by Luchsinger, resulted in unequivocal demonstration of the same fact, viz: that dilation takes place in obedience to a direct influence from the nervous centres.

It is familiar to us all that certain trunks, as the *chorda tympani*, convey uniformly dilator impulses; certain others, as the *cervical sympathetic*, solely constrictor; while yet a third class, as the *sciatic* and branches of the *brachial plexus* are mixed in their vaso-motor action, responding differently to different stimuli, under different conditions of the nervous centres. (If we stimulate the central stump of a divided sciatic in an animal under the influence of urari, *increase* of general pressure takes place; while from the same treatment of an animal under chloral, *decrease* of pressure as uniformly results). In the experiment of Luchsinger, above referred to, a kitten was subjected to dry heat until the soles of the feet were reddened; the sciatic of one side being then cut, the corresponding foot became paler. Secondly, in another animal, the sciatic of one side was first cut, and the kitten then subjected to the dry heat. The foot of the same side, which had been perceptibly reddened on section of the sciatic, became now paler than the other, by reason of the active dilatation of the other extremity.

What conclusion do we now seem to have reached? Why! that heat, wet or dry, causes an *active dilatation* of the cutaneous vessels, through the vaso-motor system; and that the "reaction," to which Dr. Emmet refers, practically does not attend the application of dry heat, but is induced by combining with this agent another, which, in at least a part of the range of its effects, is antagonistic to it. The cutaneous sur-

face resents, with indignation, so to speak, the prolonged contact of moisture, as a condition unfavorable to the performance of its functions. This repulsion is manifested by superficial muscular contractions. The vaso-motor system responds by phenomena which indicate a sort of spasm of the arterioles, and the superficial circulation is diminished. *Central tonicity* seems to have received a spur.

Cutis anserina of the drowned (which is but the response of the microscopic muscular fibres, distributed about the follicles of the skin, to prolonged contact with water at ordinary temperatures), suggests itself in illustration. But this reflex is not fully developed, *instantly*, like the dilatation excited by heat; it is a sluggish phenomenon, and, if the application be transitory, may scarcely be noted, or only so by a reaction. Hence, when we make brief use of hot water to redden the surface, constrictive results are practically absent, but the water serves as a convenient elastic medium for the thorough application of heat. Let the contact be kept up, however, and the dilator influence serves only to keep in due check its more powerful antagonist, and to convert spastic into tonic action, achieving this, withal, so gently and in harmony with normal operations as to do away with subsequent reaction. This is entirely analogous with the exquisite results, which we so often see from other nicely adjusted physiological antagonisms; and is consistent with the fact that, when it is sought to make constriction absolute (as when hot water is used in hæmorrhage), we are accustomed to employ high temperature, long continued application, and the shock of interrupted jets, as if to master dilatation at the moment of its highest exercise, and place it more completely at the mercy of its antagonist.

It is not, of course, meant that all the effects of hot water in therapeutics are explicable in this way; only those which come through vaso-motor channels (nor even all of those, perhaps). Doubtless other factors perform not insignificant parts in the very phenomena we have been considering, and, for one, it has been suggested that *osmose* is probably not the least active and influential.

For convenience of study, it seems well to tabulate the ef-

fects of our agent somewhat more systematically than is usually done. Perhaps nearly all of them may be referred, in a very general way, to six principal heads, and, accordingly, I venture to suggest the following classification, imperfect as it doubtless is, viz:

(I.) *Rubefacient effects*—secured by such modes of application as shall leave the heat-factor predominant, water being so employed as to avoid those phenomena of constriction referred to above; and auxiliary agents being commonly added, to intensify and protect the dilatation due to heat. The indications for this use of wet heat are a multitude, and justify our giving it the earliest mention.

(II.) *Vaso-tonic*—heat here being subordinated to moisture, and playing the part of a moderator of effects which would otherwise be harsh, and in a manner unwelcome to the sentient nerves. Perhaps there is no use of hot water so valuable in gynecology as this. It is quite unnecessary to say that these effects are usually secured by persistent application of water of high temperature, with or without added astringents, and, in such cases as prove rebellious, by alternation of hot and cold douches.

(III.) *Hæmostatic*—in effecting which wet heat seems to be so applied as to over-stimulate and paralyze dilator centres, and render constriction complete, with no disposition to reaction, for a more or less prolonged space of time. This is but an accentuation of No. 2.

(IV.) *Remote reflex vascular changes*—a class of phenomena unstudied (so far as I am aware), and offering a broad field for useful experiment and investigation. For who can doubt that the beneficial results of hot foot-baths (for example) in many pathological states of distant areas—pelvic, cerebral, and what not—are due as well to vaso-motor disturbances in those remote regions as to similar changes at the site of the application? To assure ourselves that such distant reflex changes are likely to ensue upon the partial application of a revulsive as violent as hot water, we have only to remember Dr. Brown-Séquard's demonstration that ice-cold applications to the lumbar region causes constriction of the renal arterioles and diminished blood supply to those organs; or Halleman's experiment or

applying cantharidal collodion to a frog's back, whereupon he noticed immediate constriction of the vessels of the web of the foot, and increased activity of its circulation. We know that slight hæmorrhage of one hand may often be checked by immersing the other in cold water.

Such instances might be cited in considerable number; but we pass on to consider—

(V.) *Anodyne, sedative and antispasmodic effects*—scarcely less remarkable than those we have considered, but familiar to us all. For a remarkable illustration, let me cite a case reported in the *American Clinical Lectures* (edited by Dr. Seguin), May number, 1874, by an authority whom I have had the pleasure of quoting to you before—Dr. Wm. H. Thompson, of New York:

“Much more effective, however, than any medicinal, for paralyzing irritant afferent, or sensory impressions, is a remedy which can be obtained anywhere, to any desired extent—and that is, simple warm water. The contact of water near the temperature of the blood which circulates about the cutaneous nerves produces on those nerves a sedation almost, if not quite, equal to the effects of general bleeding. Four years ago, I showed to our class, at a clinic held in the Chartist Hospital, Blackwell's Island, a woman who had both her lower limbs so drawn up that the heels had imbedded themselves in ulcerated depressions in her buttocks, and the adductors had so forced the knees together that the skin was wearing away from the condyles. Meantime the muscles of the legs were turned apparently into thin, rigid, whip-cords. Every attempt to straighten the limbs caused her to cry out with pain, but under ether the limbs could be drawn to their natural position, only to be seen slowly drawn up again as the effect of the anæsthetic was passing off. She had not been able to stand on her feet for nearly two years, and yet I ventured to predict that by a persevering use of the warm-water douche alone, we would succeed in wholly overcoming her disability. The result proved as I expected, for ten months afterwards she walked out of the hospital herself, and returned to her former employment as a domestic.”

It must be confessed that there are certain persons so constituted as that, after a sprain, or similar injury, the cold douche affords more comfort than the hot. This, however,

is idiosyncratic, and does not disturb our general proposition. All of us have seen, perhaps, the wonderful relief of pain, and muscular spasm after fracture, or dislocation, and the facility of reduction, when the warm douche has been faithfully used.

(VI.) The sixth indication for the use of hot water (called by Dr. H. C. Wood its "pyretic use") remains to be considered. But a study of Dr. Bartholow's above-quoted account of the phenomena occasioned by general hot baths, shows that there is nothing peculiar here—the only requisites being high temperature and long continuance, the details being suited to the especial case. Dr. Wood prescribes half an hour as the least possible duration likely to secure the desired result, in cases of shock or collapse, and 108°F. as the proper limit of temperature (of the hot bath) if the patient be insensible. In regard to the action of cataplasms in phlegmonous inflammations, it seems very plain that the idea of an increased afflux of blood is untenable. What the complete *modus operandi* is, may be hard to state definitely. One thing is certain, however,—viz., that with restoration of tone, *stasis*, which has been one of the essential phases of the inflammatory process (fostering effusion and proliferation), disappears, and we can easily understand that, under the influence of heat and moisture, purulent metamorphosis of already-formed products will proceed, *pari passu*, as the conditions which led to their existence and maintenance are done away.

I have not, in this paper, made any reference to the innumerable *modes* of applying hot water and moist heat externally. I have aimed at establishing principles—not reciting details. We have spoken of the myriad of disordered states calling for the treatment under consideration. All these things fall naturally into line when once the law which control them are appreciated.

Russian, Turkish and general baths, hot-wet-packs, etc., etc., are but varied methods of using hot water; and I hope that the day will come when we shall anticipate, as the mere application of fixed principles, uses of this agent such as are heralded every day in the medical journals as novelties—for example, "Dr. Landowski's method of irrigating hæmor-

rhoids," or some one else's mode of treating dysentery by hot-water injections.

Before closing, it may be well to suggest that our use of hot foot-baths and hip-baths, in various disordered states of the pelvic organs, may not always be sufficiently guarded. When we recollect that, by the mode of their employment, we are enabled, to a degree at least, either to diminish or increase the afflux of blood—to aggravate the congestion, or unload the vessels—we will more fully realize that hot water is an edged-tool (like most other useful ones).

In the words of Dr. Michael Foster: "By augmenting or inhibitory influences (constrictor or dilating), applied either to peripheral mechanisms or to cerebro-spinal centres, and called forth by stimuli, either intrinsic and acting through the blood, or extrinsic and acting through nervous tracts, the supply of blood to this or that organ or tissue may be increased or reduced, the surplus or deficit being carried away to, or brought up from, either the rest of the body generally, or some other special organ or tissue."

Had some enterprising manufacturing pharmacist secured a monopoly of the hot water supply, we should not now have to study its physiological action, but would long ago have understood the *rationale* of its clinical uses.

1345 *F. St., N. W.*

ART. V.—**Amenorrhœa Producing Septicæmia and Dermatitis Multiformis.** By A. F. KERR, M. D., Williamsville, Va.

I take liberties with medical nomenclature, perhaps, unwarranted by the facts developed in the history and clinical record of the following case, which recently came under my care. While I do not desire to make a "new departure" in nosology, I have, in the absence of something better, applied the title heading this paper, as more nearly expressing the clinical feature exhibited during the progress of the disease—viewing it from the pathological standpoint, which I assume to be correct, in recording the case, which to me was a remarkable one and full of interest—the like of which I

have never seen, nor am I able to find a similar case described in the text-books within my reach.

In giving the clinical history of this case, I have to rely mainly upon memory, as no notes were taken until late in its advancement; hence I cannot give exact dates or intervals of time, as to the different phases the disease assumed during its progress.

Miss Hattie L., aet. 17; rather florid complexion; general health good until present illness; began to menstruate at 13 years of age, and continued "regular" until February last, when she attended a dance, became very warm, and while in this condition, stepped into the open air and subsequently rode some miles home. She "caught cold," and menstruation ceased. Various domestic remedies were used to re-establish the flow, but without effect. The suppressio menses was followed by a dull pain in the right shoulder and breast, a dry, hacking cough, and constipation.

These symptoms continued until May 15th, 1886, when I was called to see her, to find the conditions above described. Recognizing in the history of the case some hepatic disturbance, with arrest of functions of all the secretory organs, in addition to the uterine disturbance, I prescribed such remedies as would tend to stimulate them and establish the menstrual discharge. From motives of modesty, I was refused an examination of the womb, until late in her illness, when a digital examination was permitted, with negative results as to the cause of the amenorrhœa. But during her entire illness there were no prominent symptoms attending arrest of uterine functions until August 4th—13 days before death, when there appeared a discharge from the vagina of a whitish, jelly-like, odorless material, which continued three days, and then ceased. There was nothing in the behavior of the kidneys requiring special attention, except what is usually observed in all wasting diseases. The bowels were irregular in their action—at times constipated, then loose, and the movements were attended with pain. These disturbances were, in most instances, traceable to indiscretion in eating. There was no special gastric disturbance, and the appetite continued fair, but somewhat perverted, the patient craving diet unsuitable for an invalid. There was no organic lung lesion, unless possibly hypostatic abscess during the latter stage of the disease, respiration being at all times free and regular. There was a dry, hacking cough, very annoying at night—when she was first seen,

which became loose—the patient expectorating freely a frothy and sometimes muco-purulent sputa, continuing till death. An abscess, discharging odorless pus, formed in the interclavicular notch, burrowing extensively in the connective tissue of the neck, but producing no pain or other disturbance. The mental faculties remained undisturbed throughout her illness.

About June 1st, the face, hands, forearms and feet began to swell, presenting a puffy, œdematous appearance—the skin on the face and forearms assuming a distinct purplish hue, and the swelling greatly distorting the features. In a few days there began to appear on the face, forearms and dorsal aspect of hands, numerous blebs about the size of a large split pea, involving nearly the entire surface affected, round and oval in shape, with tense walls, and containing a clear fluid; and on the hands and forearms, interspersed among the blebs, were to be seen numerous pin-head-sized pustules, containing whitish looking pus. In three or four days the blebs began to rupture—their contents rapidly forming first yellowish, then brownish crusts, looking rather like one continued crust. On the forearm the crust remained somewhat soft, became detached in a few days, and was easily removed, leaving on the underlying integument a cheese-colored, oily material, about the consistency of the *vernix caseosa* of new-born infants. The removal of this unctuous material, which was readily accomplished, showed a livid, sensitive skin. On the face the crusts were thick, hard and adherent, and were removed with difficulty after some weeks. On the neck they continued soft and oily, the folds of integument producing deep and very painful fissures, as was also the case about the elbow joints.

On the palmar surface of the hands, the fingers, arms, the toes and plantar surface of the feet, the skin became very much thickened and hard, having the appearance and consistency of raw-hide. This condition of the skin succeeded the removal of the crusts from the forearm also, but not so thick and hard. In fact, the whole surface of the body had this thickened sclerosed appearance and consistency, but not so marked as on the parts above mentioned, and the unfortunate sufferer was forced to lie on her back as immovable as if encased in a plaster-paris jacket. In time the "rawhide" became detached, and was removed piecemeal, in rings from the arms, and much after the manner of removing a glove, from the fingers and toes.

On the legs and body the eruption assumed the squamous

type, the skin peeling off rather in large bran-like scales, varying in size from bran hulls to scales as large as one's hand, until the first crop was removed, when this scaling process continued without intermission during the patient's illness, one crop succeeding another continuously, and involving the whole tegumentary surface; the parts affected with the bullous and sclerotic lesions became similarly affected.

An incident suggestive of the poisonous effect of the diseased skin may be worthy of note. Upon removal of diseased portions of the skin, as it became detached, it was thrown into the fire and burned. On one occasion, however, some was thrown out of an open window near the bed, and a pup, passing by in a few moments, ate it, and in an hour was dead. This may have been only a coincidence, but no other cause for the death of the pup could be assigned.

There was a rapid pulse and high temperature during the three months I attended the patient. The pulse was never less than 112, generally 120 to 140, and on one occasion reached 160 per minute. The temperature was not taken except once—June the 18th, when the thermometer registered 103.5°F.—until July 23d, when it was 100°; pulse, 120; temperature continued 100° to 103° until death. The pulse was more rapid and the temperature higher in the evening than morning. Respiration from 24 to 32.

During what might be properly termed the acute stage of the skin lesion, the patient complained of an itching, burning sensation, feeling as if the skin was being scorched, and, in fact, the entire lesion seemed the product of a burning process.

I have, as briefly as is consistent with clearness, presented the history of the case in all its details, omitting nothing, so far as my memory serves me, that would throw light upon the case; and yet I am painfully sensible of a failure in my effort to paint the picture in colors that will give even a faint idea of the original. Nothing but a daily attendance at the bedside, closely observing the variety of phases the case presented, as it progressed from day to day, would give one an intelligent idea of the true nature of the affection.

The treatment was mainly expectant, reliance being had upon supportive measures, as good, simple, nutritious diet; and in this I failed to secure the co-operation of patient's friends, as she was allowed almost everything she called for.

The medical treatment consisted in quinine, aconite and veratrum viride, to reduce fever, with iron, nux vomica, and later, Donovan's solution, as tonics, and permanganate of potassium as a direct emmenagogue.

As a local application to the skin, oxide of zinc, ammoniated mercury, and iodoform with vaseline, were successively employed, and as diseased portions of the skin became detached, their removal was effected with scissors and dressing forceps.

I never, at any time, saw any appreciable benefit result from the treatment, and I am now persuaded that the patient might have possibly fared better, had no active measures been adopted. This active treatment was continued only about five weeks. Electricity was then used as a uterine stimulant, but without effect.

The question, What is the disease? suggests itself. I regarded it as one of the forms of septicæmia. Was the suppressio mensium the cause of the septicæmia and dermatitis, or were they primary affections existing independently of the amenorrhœa, or was there in fact a septicæmic condition existing as a factor in this complex case? Assuming the amenorrhœa to be the primary disease, I answer, that septicæmia existed as a result of the cessation of the menstrual flow by the absorption of septic matter, the product of the decomposition of the menstrual fluid, into the circulation, that from some cause failed to find its way out per vias naturales. And this theory of the septicæmia is strengthened by the appearance of the whitish jelly-like vaginal discharge in the latter stage of the patient's illness, which was evidently the product of decomposition, and by the prolonged high temperature and rapid pulse, which continued throughout the disease. The odorless character of the vaginal discharge may here be noted. In the text-books I have examined I find no reference to a discharge presenting such peculiarities; but observed it once in a woman attended in her confinement by a midwife who failed to remove all the secundines—puerperal septicæmia resulting, and this odorless, whitish, jelly-like material was the product of the decomposition of the retained secundines.

That the skin lesion was the result of blood-poison may also be proven by the high temperature and rapid pulse, as well as by the further fact that no such lesion could possibly result from a superficial inflammatory process, independent of constitutional disturbance. An odor emanating from the skin during the initial stage of the affection, similar to that described by menstruating women as belonging to the menstrual discharge, would also seem to indicate that, failing to find an outlet per vias naturales, the menstrual fluid became absorbed, after decomposition—this peculiar odor being the outward manifestation of its presence in the blood. That the nervous system may enter as a factor in the production of this affection is not to be denied, and may possibly have been the *fons et origo* of the whole trouble; but the clinical history of the case would scarcely warrant such a conclusion. That this skin disease was a dermatitis I presume no one will deny, and that it was multiform in its manifestations is evidenced in the existence of bullous, pustular, sclerotic and squamous varieties of skin lesion. Hence the appropriateness of the title given this paper, although I have no knowledge of the existence of such a disease.

Duhring describes a rare disease in his chapter on skin diseases in *Pepper's System*, Vol. IV., to which he gives the name dermatitis herpetiformis, and claims priority in classifying it as a separate disease in a paper read before the American Medical Association in 1884, and which bears some resemblance in its clinical features to the disease I have attempted to describe; yet it lacks some of the prominent symptoms. This disease he describes as "multiform and protean in character, consisting in the formation of herpetic, erythematous, vesicular, pustular and bullous lesions, occurring separately or in various combinations, accompanied with itching and burning sensations, and pursuing usually a chronic course." He assigns various causes for the production of the disease, many cases being neurotic in origin, following shock of the nervous system. Septicæmia and irregular menstruation are also mentioned as causes. The symptoms of dermatitis herpetiformis are more or less constitutional disturbance, consisting of malaise, slight fever,

and constipation. Increased heat of skin, itching and burning are also prominent symptoms. The disease may manifest itself in any one of the forms above-mentioned, may gradually pass from one into the other, or two or more varieties may occur at the same time, constituting the multiform variety.

After describing the above-mentioned varieties, he says : "In the bullous variety the lesions are more or less typical blebs, variable as to size and shape, seated upon a slightly inflamed or non-inflammatory base. They tend to group, in which case the skin between them will be red, as occurs in herpes zoster. Together with the blebs, vesicles and small or even minute whitish pustules will usually be found, the combination of these varied lesions being somewhat remarkable. The blebs generally rupture or are broken by injury, and become the seat of yellowish or brownish crusts."

I have quoted at length from Duhring's article to show the striking similarity in the two diseases, and yet the picture he draws of dermatitis herpetiformis is mild indeed as compared with the disease to which I have given the name dermatitis multiformis; and the careful reader will notice the absence, in the former, of symptoms especially prominent in the latter disease—for example, the high temperature and rapid pulse, the extent of the lesion, involving, as it did, the entire tegumentary surface. Besides, he makes no mention of a squamous variety in dermatitis herpetiformis, while this was a prominent variety of skin lesion in the disease we are considering. He speaks of the constitutional disturbance being only slight in the former, while in the latter it was very pronounced. So that, in the light of the present knowledge of dermatitis herpetiformis, it must be excluded in the diagnosis, unless the differentiating symptoms be added and the clinical history intensified. Not daring to take such liberties with Dr. Duhring's disease, and failing to find any other with which to associate it, I am led to conclude that the disease which I have attempted to describe is entitled to some claims as a separate and distinct disease, and to a place in the nosological table of skin affections.

Dr. G. W. Nickell, of Millboro' Depot, Va., saw the case

in consultation on June the 18th, to whom I advanced the opinion given in this paper as to the nature of the disease and its cause, in which he concurred, and approved my treatment, and to whom I here take occasion to acknowledge my indebtedness for valuable suggestions as to its subsequent management; but all our theories as to the causes giving rise to such a peculiar and complex disease, and our efforts in her behalf to relieve her malady, were unavailing. Death claimed her for his own, and after a desperate struggle with the grim monster, of more than three months' duration, she, on August 17th, yielded to his seductive influences, and passed over the river to "rest under the shade of the trees."

Correspondence.

Opium and Camphor—Reciprocal Antidotes.

Mr. Editor: After testing the above agents for many years in various ways, I feel it to be my duty to make known to the medical profession the results of my experience in the line above indicated. I do so with the hope that the subject may receive the attention which its importance merits, confident that the experience of others will verify my own.

I will not attempt to give the *rationale* of the *modus operandi* of camphor and opium antidotally, for (unlike belladonna and stramonium, as opium antidotes) neither seems to possess a physiological record at all suggestive of the antidotal influence which they exert upon each other.

As fatal results, however, seldom, if ever, occur from the poisonous effects of camphor, I shall in this communication confine myself chiefly to that branch of the subject—so very important to human life and health, namely, *Camphor as an effective and safe opium antidote*. Here let me emphasize that I claim for camphor antidotal effect *only* as to the poisonous, narcotic, or toxic effects of opium—leaving a wide field of influences for observations in other directions.

As an antidote in a case of poisoning by opium or any of

its preparations, camphor in any of its forms may be used with the same result; but I have found the oil to be the best in every respect, for it acts more promptly than the spirits or the powdered gum, and from the smallness of the dose, can be always administered in sufficient quantity, even to an infant, and if such emergency arise it may with safety, I think, be injected hypodermically into the veins, though I have never had occasion so to use it. It should always be diluted more or less with glycerine, especially when injected in the veins.

I have found that fifteen to twenty-five minims of the oil of camphor are sufficient to neutralize in a short time the toxic effect of half an ounce of laudanum of more than officinal strength, removing quickly, in sufficient dose, coma, stupor and narcotism, and leaving the patient in a harmless state of sleepy wakefulness, which lasts for a length of time corresponding to the quantity of the opiate taken. The antidote should be given in broken doses in quick succession, as it acts promptly, especially if the quantity of poison taken is uncertain. I have made it a rule not to give more camphor than to produce the condition I have described above, although aware of the fact that opium would antidote the effects of the camphor, if, by accident, given in such quantity.

In conclusion, I take the liberty of stating that I have found the therapeutic fact here given to the medical profession of far more value in its bearing on the treatment of diseases in general than it can possibly be as an antidotal fact, even if it should, in the hands of the profession, prove to be all that I claim for it as such.

Respectfully,

P. P. DUVAL, M. D.,

Richmond, Va.

A Certain Feature of the Law Regulating the Practice of Medicine and Surgery in Virginia.

Mr. Editor: As one of the few remaining charter-members of the Medical Society of Virginia, I deem it expedient to make a few practical remarks in regard to a certain feature

of the law regulating the practice of medicine and surgery in our State, etc. I observed in your October number an article from one of the Board of Examiners, on "Examination of State Border Practitioners," which I do not propose to discuss. I am always pleased to read the opinions of my professional brethren on important questions, whether I agree with them or not.

For the last sixteen years I have been a practising physician in this city, since which time I have endeavored to utilize my efforts in elevating the standard of my profession, especially in my State. I have spent both time and money in building up the Medical Society of Virginia. I did my best to have a law passed by the Legislature to regulate the practice of medicine, which I partially succeeded in doing several years ago; and I extended my influence in behalf of securing the passage of the present law to regulate the practice of medicine and surgery in our State. While I did not approve of all the provisions of the bill, yet I favored its passage as better than no law. One of the principal features in the bill I presented to the Legislature some six or eight years ago, was that every physician in the State, before obtaining a license to practice medicine and surgery, should be a graduate of some recognized medical institution of this country or Europe, requiring his name to be registered in the city or county in which he resided, with the college and date of his graduation. A diploma from a recognized medical institution should be sufficient evidence of the qualifications, etc., for the weighty responsibilities of the profession. I thought that this requirement would have given the necessary protection to our people against impostors, etc. In many States a diploma from any reputable medical institution is all that is required. One of the chief features—and I think seemingly unjust—of the present law regulating the practice of medicine and surgery in Virginia, is that every physician—it matters not from whence he comes, how long he has been practising his profession, or at what institution he graduated—shall be subjected to an examination before the State Medical Examining Board, if he desires to practice his profession in Virginia.

Now, Mr. Editor, this clause of the law, in my humble opinion, should at least be modified. Young graduates ought and should stand better examinations before a Medical Examining Board than physicians who have been practising their profession for ten or twenty years. The young doctor is fresh from the halls of college, and is supposed to be well grounded in the minutiae of every branch of the profession, while the doctor of fifteen years of professional toil has become rusty, to a great extent, in the minutiae of medical science, much of is being non-essential for his success, from a practical standpoint. We should be generous. It seems to me if the law bearing on this particular feature could be modified so as to read somewhat as follows, it would be more reasonable and just:—"Any physician locating in Virginia to practice medicine and surgery shall be a graduate of a recognized medical institution, he having been a reputable practitioner of medicine in his State or country for at least ten years. These facts to be recorded before a license shall be granted him to practice medicine and surgery in this State. Or a certificate from a Board of Medical Examiners from any other State should be all that is required."

Under the present law, if a distinguished physician, of national reputation, were to locate in this State to practice his profession, he having been practising medicine for twenty or thirty years, would have to be subjected to an examination before the Board of Examiners of this State, or abandon his profession. This, it seems to me, has rather a selfish disposition on the part of the profession of our State. There is room for accomplished physicians, and I welcome them to the soil of the Old Dominion.

I have given my views in a very cursory manner for what they are worth, and trust that certain features of the law will be modified.

THOMAS J. RIDDELL, M. D.

Richmond, Va., Dec. 7th, 1885.

[NOTE BY EDITOR.—We have seldom seen a house of any pretensions, built according to the original carefully studied and approved design, that did not need some alteration to be made in it after the owner had come to live in it. But

the prudent builder and occupants will, at least, select suitable weather for unroofing and opening up the house before attempting to make the changes. To admit, as we have suggested in a previous number, that certain inter State courtesies and agreements should be established, the time has not come for such a radical change in the Virginia or North Carolina laws as our correspondent recommends. *When* the other States establish Boards of Examiners, with the same requirements of applicants for practice as North Carolina and Virginia, *then, but not till then*, will it be prudent for either of the two States named to accept the suggestion of our friend and earnest worker for all that interests the good of the profession.]

Proceedings of Societies, Boards, etc.

MEDICAL EXAMINING BOARD OF VIRGINIA.

OPERA HOUSE, FREDERICKSBURG, VA.,
10 A. M., Oct. 26, 1886.

The Medical Examining Board of Virginia met in its second regular semi-annual session, pursuant to the call of the Vice-President and Acting-President, Dr. H. Grey Latham, of Lynchburg.

The roll being called, the following gentlemen, members of the Board, were present: Dr. Latham, Vice-President; Dr. Nelson, Secretary, etc.; Drs. Brown, Carmichael, Claiborne, Conway, Cullen, W. W. Douglas, Finney, Alex. Harris, W. J. Harris, Huffard, Lewis, Martin, Meriwether, Moore, Nash, Neff, Patterson, Peek, Preston, Taylor, and Walker.

Seven applicants for examination being present, in order to allow them to get to work as speedily as possible, the rules were suspended, and the Chemistry Examination Questions were submitted to the Board by Dr. R. A. Lewis, the Chairman of the Section. The questions, having been duly ratified by the Board, were given over to the candidates in rooms adjoining, under charge of the Chairman of the Section, and the business of the session was proceeded with.

The minutes of the previous session, held in Richmond on the 7th, 8th and 9th of April last, were read and approved.

The Chairmen of the several Sections were then called on for the examination questions in their respective depart-

ments—a copy of each of which as ratified by the Board is appended to this report as a part of the same.

These examination questions were ordered to be given to the applicants in due order, three hours being allowed for the completion of the answers to the questions on each Section, the Board having been satisfied that this was ample time for the accomplishment of the task by fairly qualified students.

The routine business of the Board was then taken up. The report of the Acting-President coming first, was read, and ordered to be spread upon the minutes.

Dr. Latham stated that, as Vice-President, upon the resignation of Dr. Dabney as a member of the Board, in September last, he had assumed the duties of President of the Board, which had mainly consisted in receiving reports from Examiners, and informing applicants of the results of their work. Eleven applicants had been granted permits to obtain license, and one had been rejected—this last for the second time. With regard to Dr. Booton, an applicant previously rejected by the Board, and practising medicine in Rappahannock county, the matter was in the hands of the Commonwealth's Attorney of that county, who would have Dr. Booton indicted as soon as a grand jury could be empanelled.

As to the practical benefits to the community arising from the establishment of this Board, it would be a long time before the general public would fully appreciate them; but to those who had been witnesses of the dense and dangerous ignorance of many who had appeared before it with diplomas from colleges of high standing, there could be no question of the great good already accomplished, and of the imperative necessity of interposing this bulwark between charlatanism and credulity, as there is no instinct in the mass of society to detect the true prince, and distinguish the quack from the physician.

The members of the Board must hew close to the line, unbiased by fear, favor or affection; nor must the struggles of poverty, the dependence of helpless relatives, nor any other appeal to their hearts, induce them to swerve a hair's breadth from justice. Thus this Board would be established in the respect of the community, and the class of persons unfitted by education or capacity for the adornment of a noble profession would be restrained from entering upon its study.

Thus far there had been no by-laws for the government of the Board. Hence he had, at the suggestion of the Secre-

tary, appointed a Committee to draft rules for its future guidance, which Committee would doubtless report at this present session.

Asserting that he had no claim of merit, or other than a sincere desire, common to every member of the Board, to sustain a high standard of medical education in the State, and to secure the approval of the profession and the community for the work of the Board; and disclaiming all right of succession, he left the office in the hands of its members for such disposal as might seem best to them.

Dr. W. C. Dabney, of Charlottesville, late President of the Board, who was present by invitation, at the request of the Acting-President, then made a report, as follows:

"I beg to present the following report of my official work as President of the Medical Examining Board of Virginia from April 6th, 1886, to August —, 1886, when the Governor accepted my resignation:

"Forty-two candidates during that time passed satisfactory examinations, and were furnished with certificates to that effect. Of this number, four had been rejected, and had stood a second (satisfactory) examination. Twelve candidates were rejected during the same period, and were notified accordingly. One of the twelve rejected applicants had been rejected once before (March 27th, 1885). Dr. E. F. Corbel did not complete his examination at the last meeting of the Board, in Richmond, on account of sickness, and was allowed to complete it subsequently before Dr. J. H. Claiborne.

"Just before my resignation, I wrote letters to Dr. T. L. Booton, of Rappahannock county, who was practising illegally, and also to the Commonwealth-Attorney, and to the Commissioner of the Revenue of that county, urging his immediate prosecution.

"It is with great pleasure that I have to announce that the *Halsey Case*, referred to in my last report, has been passed upon by the Court of Appeals, and the *Medical Act* was sustained in every particular. This decision, therefore, places your Board on a firm basis.

"In conclusion, gentlemen, I beg that you will allow me to express my sincere thanks for the uniform kindness which I received at your hands while I was your presiding officer, and my regrets that I am no longer a member of the Board. I look forward with confidence and satisfaction to its increased usefulness to the State.

Very respectfully, etc.,

WM. C. DABNEY."

This report was, on motion, accepted, and ordered to be spread upon the minutes.

In the absence of any established order of business, the Secretary called up the Election of Officers, and nominated for President, Dr. H. Grey Latham, of Lynchburg. No other nomination was made, and the Secretary put the vote, which resulted in the unanimous election of the nominee.

On motion of Dr. Nash, election by ballot was ordered, "*without nomination*," and the Board proceeded to ballot for Vice-President.

On counting the ballot, Dr. J. H. Claiborne, of Petersburg, Va., was found to have received a majority of the votes cast, and was declared elected.

On motion of Dr. Peek, the Committee appointed *in vacation* by Dr. Latham, Acting-President, to draft a set of By-Laws, was called on for its report. This Committee, consisting of Drs. Hugh M. Taylor (Chairman), Harvey Black, Alexander Harris, Herbert M. Nash, and Robert J. Preston, reported in full through its Chairman.

The report, with a few alterations of minor importance, was accepted, after having been read first as *a whole*, and then *by Article*, each Article being declared open for discussion as soon as read. The Committee was, however, ordered *continued*, and a copy of the By-Laws is appended to this report of the proceedings.

Resolved, That it shall be the duty of the President of this Board to *examine* the questions on each Section (or branch) when reported by any member of this Board, acting as a private Examiner, and if, in *his opinion*, said questions do not come up to the standard established by the public examinations by this Board, or are not sufficient to test the qualifications of the applicant, he shall report said questions to the Board, at its next meeting, for approval or censure.

The Chair assigned the members of the Board to the several Sections as below—retaining the same gentlemen as heretofore appointed on their respective Sections, only filling out vacancies, and assigning the Homœopathic members to suitable Sections.

SECTION ON CHEMISTRY:—Drs. R. A. Lewis (Chairman), Peck, Dickinson, and Nelson.

SECTION ON ANATOMY:—Drs. Taylor (Chairman), McGuire, Lankford, and Huffard.

SECTION ON HYGIENE AND MEDICAL JURISPRUDENCE:—Drs. Claiborne (Chairman), Carmichael, Cullen, Wiley, and G. L. Stone, (H.)

SECTION ON PHYSIOLOGY:—Drs. Black (Chairman), Robinson, Nash, and I. S. Stone.

SECTION ON MATERIA MEDICA AND THERAPEUTICS:—Drs. Preston (Chairman), Conway, Stockdell, Neff, and Douglas, (H.)

SECTION OF OBSTETRICS AND GYNÆCOLOGY:—Drs. Alex. Harris (Chairman), Walker, W. W. Douglas, Finney, and Taber, (H.)

SECTION ON PRACTICE OF MEDICINE:—Drs. Martin (Chairman), Brown, Patterson, W. J. Harris, and Jones, (H.)

SECTION ON SURGERY:—Drs. Moore (Chairman), Greer, Meriwether, Webster (H.), and Latham.

In accordance with provision contained in the By-Laws, the Chairmen appointed the following Committees:

COMMITTEE ON LEGISLATION:—Drs. Black (Chairman), W. W. Douglas, and Moore.

EXECUTIVE COMMITTEE:—Drs. Taylor (Chairman *pro tem.*), Preston, Nash, and Latham and Nelson—the last two *ex officio*.

Dr. Taylor stated that it had come to his knowledge that the Buffalo Lithia Springs Company and the Warm Springs Company were anxious that they should be allowed to employ their resident physicians, respectively, from outside the State if they preferred, without such physicians being subjected to the ordeal of the State examination. After considerable discussion as to the propriety of having any special examination, the matter was referred to the Legislative Committee.

Dr. Nelson then made his report as Secretary:

He stated that some members of the Board had never attended any of its sessions, and that several of the members to whom checks had been sent in payment of the mileage ordered at the last session, had never even acknowledged their receipt. Thirty-seven postal-cards had been sent out notifying the members of the time and place of the current session, each card containing the request for reply. Only sixteen answers had been received; three of these sixteen regretting their inability to be present.

There were on hand a thousand copies of the "*Revised Medical Act*," printed in connection with the section of the "*Tax Bill*" in reference thereto, which were for distribution and circulation—the object of the outlay being the information of the profession, county clerks, commissioners of the revenue, and county treasurers, some of whom seem to have forgotten the existence of the "*Act*."

Some members of the Board were in the habit of examining applicants without their having received a *permit* from the President, countersigned by the Secretary; and on more than one occasion a *fee* had been received, with nothing to show who had paid it. The previous action of the Board required that no Examiner should examine an applicant without this *permit*; and that the object of forcing each applicant to secure this *permit* before being examined was that an official record of his age, college of graduation, moral character, year of graduation, or years in practice, might be kept for statistical and other purposes.

The Treasurer's report was then made by Dr. Nelson. The Auditing Committee, consisting of Drs. W. W. Douglas and Peek, was appointed to examine the accounts, and this Committee reported that the accounts were correct, and accurately supported by proper vouchers. The report was ordered to be put upon the minutes, as below :

TREASURER'S REPORT,

*Medical Examining Board of Virginia, from April 7th, 1886,
to October 26th, 1886, inclusive.*

April 9th. Amount on hand.....	\$241 12
October 26th. Amount received to date.....	125 00
Total.....	<u>\$366 12</u>

EXPENDITURES (per cash-book).

Advertising April session.....	\$ 1 00
Stationery consumed at session.....	4 75
Paid janitor at Capitol.....	5 00
Express charges on books.....	1 00
President's expenses Halsey trial.....	7 50
Stationery ordered by President.....	6 75
Refunded Dr. Barrett.....	5 00
“ Dr. T. P. Wynn.....	5 00
Postage stamps.....	1 00
Secretary's expenses Halsey trial.....	3 00
Mileage paid members.....	237 24
Postage stamps.....	1 50
Express charges and telegram.....	75
Examination blanks;.....	17 83
Envelopes and ink.....	1 45
Postal cards and printing.....	2 00
Bill rendered by Secretary.....	2 90
One thousand copies Medical Act.....	6 00
Total.....	<u>\$309 67</u>
October 26th, On hand.....	<u>\$ 56 45</u>
	\$366 12

The applicants finished their examination in the time allotted, and on the morning of the third day, the certificates were issued to the following gentlemen :

NAMES.	P. O. ADDRESS.	COLLEGE OF GRADUATION.
Dr. C. L. Culpeper...	Portsmouth, Va...	{ University of Virginia..... 1885. Col. Phys. and Surgeons, N. Y.... 1886.
" Peyton B. Green..	Wytheville, Va.....	University of Virginia..... 1885.
" James P. Roy....	Richmond, Va. ...	University of Virginia..... 1885.
" R. B. James ,...	Axton, Va.	University of Virginia..... 1886.
" Wm. H. Tate....	Hartwood, Va.....	Louisville Medical College..... 1874.

To this list may be added here the applicants examined by individual members of the Board since the last official publication in the October number, 1886, of the *Virginia Medical Monthly* :

NAME.	P. O. ADDRESS.	COLLEGE OF GRADUATION.
Dr. Ben. W. Brown...	Richmond, Va. ...	University of Virginia,..... 1886.
" Leigh Buckner...	Roanoke, Va.....	Medical College of Virginia..... 1885.
" Jas. H. Bugg (C.)	Lynchburg, Va...	Leonard Med. Sch., Raleigh, N. C... 1886.
" W. M. Holladay.	Hamp. Sid., Va...	Hosp. Col. of Med., Louisville, Ky.. 1885.
" E. W. Morris.....	Ashland, Va.....	Medical College of Virginia..... 1885.
" C. B. Page.....	Univ. of Virginia.	University of Virginia..... 1886.

Two of the applicants were rejected during the present session of the Board, one for the second time, and one was rejected by individual Examiners, also for the second time, an aggregate of three applicants rejected since the last published report. They represent, respectively, the *Medical Department of Howard University*, Washington, D. C.; *College of Physicians and Surgeons*, Baltimore, Md.; and *Medical Department of Howard University*, Washington, D. C.

Tabular Statement of Results of Examinations by the Medical Examining Board of Virginia during the first two years of its organization—1885 and 1886.

INSTITUTIONS REPRESENTED.						
	Applicants from each appearing before the Board.	Applicants from each rejected by Board.	Applicants from each granted Certificate by Board.	Rejected Applicants from each applying second time.	Second Applicants from each rejected second time.	Second Applicants from each granted Certificates.
Medical College of Virginia, Richmond.....	29	.....	29	.....	.....	.....
University of Virginia.....	19	.....	19	.....	.....	.....
College of Physicians and Surg., Baltimore, Md..	24	8	16	4	2	2
University of Maryland, Baltimore, Md.....	16	5	11	1	.....	1
Jefferson Medical College, Philadelphia, Pa.....	7	3	4	2	.....	2
Vanderbilt University, Tennessee.....	3	1	2	1	.....	1
Bellevue Hospital Medical College, New York...	3	.....	3	.....	.....	.....
Med. Dep. Howard University, Wash'ton, D. C.†	3	3	.....	1	1	.....
University of the City of New York.....	3	.....	3	.....	.....	.....
Louisville Medical College, Kentucky.....	2	1	1	.....	.....	.....
Detroit Medical College, Michigan.....	2	1	1	1	.....	1
College of Physicians and Surgeons, New York...	2	.....	2	.....	.....	.....
Hospital Medical College, Louisville, Ky	2	.....	2	.....	.....	.....
University of Michigan, Ann Arbor, Mich.†.....	1	.....	1	.....	.....	.....
Columbus Medical College, Columbus, O.....	1	1	.....	.....	.....	.....
St. Louis Medical College, St. Louis, Mo.....	1	.....	1	.....	.....	.....
Med. Dep. University of Tennessee, Nashville...	1	.....	1	.....	.....	.....
Kentucky School of Medicine, Louisville, Ky...	1	.....	1	.....	.....	.....
Leonard Medical College, Raleigh, N. C.†... ..	1	.....	1	.....	.....	.....
Hahneman Homœopathic Med. Col., Philad'a†..	1	.....	1	.....	.....	.....
Heidelberg, Germany.. ..	1	.....	1	.....	.....	.....
Non-Graduates.....	4	3	1	.....	.....	.....
Total (21 institutions).....	125*	26	99*	10	3	7

*These two columns added up give 127 and 101 respectively; but of the nineteen applicants graduated from the University of Virginia, one afterwards graduated at Bellevue Hospital Medical College, and another at the College of Physicians and Surgeons of New York.

† These are homœopaths.

‡ These Colleges are for colored persons.

Total number of individuals examined.....	115	
“ “ “ re-examined..	10	
	<hr/>	125
Total number Certificates issued after first examination.....	92	
“ “ “ “ “ second examination..	7	
	<hr/>	99
Total number Applicants rejected after one examination.....	23	
“ “ “ “ “ two examinations..	3	
	<hr/>	26
Percentage of Applicants rejected.....	20.8	

EXAMINATION QUESTIONS.

Fall Session Medical Examining Board of Virginia, 1886.

CHEMISTRY.

1. Give chemical composition and sources of ammonia, its mode of preparation, its chemical properties, therapeutic uses, its salts, and its antidote.

2. Give composition of atmosphere, the uses of its different constituents, and the relation of each to organic life.

3. Name the ores from which lead and zinc are obtained. and give process of reduction of each; name their oxides and salts, and give their chemical, therapeutic, and economic uses.

4. Give the methods by which arsenical compounds may be detected *beyond doubt*, including full description of apparatus and mode of preparation of re-agents employed.

5. What is a hydrocarbon? Name four of the products coal tar used in medicines and the arts.

6- Proteids: occurrence in nature, elements which enter into their composition, and some of their properties.

ANATOMY.

1. Describe the superior maxillary bone; also, the bones forming the cavity of the orbit. Define diaphysis, epiphysis, and apophysis.

2. Give the relative positions and the names of the muscles, tendons, nerves and blood-vessels found in front, behind and on each side of the ankle-joint.

3. Give the relative position of the artery, vein and nerve in the carotid, subclavian, axillary, external iliac and femoral regions, and the *land-marks* for finding them in each.

4. Describe the formation of the solar and lumbar plexuses of nerves, and the distribution of their branches.

5. Describe the formation of the brachial plexus and its relation to the subclavian and axillary arteries.

6. Locate and describe fundus of bladder and uterus;

Wharton's and Steno's ducts; Nuck's and Hunter's canals; foramen of Winslow and Hesselbach's triangle.

7. Describe the vascular and nervous supply of the arm and forearm, and especially the relation of the arteries, veins and nerves in front of the elbow.

8. Describe and name the lobes, ligaments, fissures and sets of vessels of the liver; also, the lobules and their formation.

HYGIENE AND MEDICAL JURISPRUDENCE.

1. What is the best method of disinfecting: (a) A house; (b) Water-closets; (c) The clothing of persons with infectious diseases?

2. State the general causes of disease, and modes of infection.

3. State several of the best disinfectants and their relative value.

4. What is the best method of purifying water and fitting it for domestic use?

5. Define infanticide, and state how you would tell whether a child found dead had been born dead or alive.

6. How would you determine: (a) Whether a wound had been inflicted before or after death? (b) Whether a person had been drowned, or the body thrown into the water after death?

PHYSIOLOGY.

1. Describe the processes directly and indirectly instrumental to the function of nutrition.

2. Name the secretions with the organs engaged in their elaboration, and the excretions with the organs by which they are eliminated.

3. Describe the varieties of epithelium, their functions and the situation of each variety in the mucous tracts.

4. Give the physiology of the skin including the functions of its glandular structures, and its vicarious relations to other organs.

5. Physiology of the seventh pair of cerebral nerves.

6. Describe the columns of the spinal cord and their functions.

7. Give normal constituents of the urine, with the average quantity excreted per day.

8. Give probable causes of the respiratory sense, and the changes produced in the blood by the suspension of respiration.

MATERIA MEDICA AND THERAPEUTICS.

1. Define therapeutics: general and special.

2. What is the safest general anæsthetic? Give its properties and mode of administration.
3. What precautions are necessary before and during the administration of anæsthetics?
4. Define emetics—direct and indirect: name three of each class and doses.
5. What are alteratives; mode of action; chief ones in use, and doses?
6. Name the most reliable vegetable astringents, and dose of each.
7. Give the origin, use and different preparations of belladonna; dose of each preparation.
8. Describe the different modes of alimentation in the order of their value.
9. Give dose and uses of chloral hydrate in practice.
10. Give the different preparations of opium and doses; and give treatment of opium narcosis.
11. Name the mineral acids used in practice, their therapeutical uses and doses.
12. Name the chief ferruginous tonics and doses.

OBSTETRICS AND GYNÆCOLOGY.

1. Give the symptoms and signs of pregnancy, with the diagnostic value of each.
2. State the causes of *ante-partum* and *post-partum* hemorrhage with the period of gestation at which *ante-partum* hemorrhage is most likely to occur; with the management of each.
3. Under what circumstances is *instrumental delivery* called for? Describe the mode of procedure in each.
4. Give indications and contra-indications for ergot in labor, and some of the dangers incurred by its improper use.
5. Give varieties, diagnosis and treatment of puerperal convulsions.
6. Under what circumstances should delivery be effected by *podalic version*, and how would you turn?
7. If at birth the child does not breathe well, what steps would you take to establish respiration?
8. Give physical signs of inverted uterus; and differentiate from polypus and fibrous tumor.
9. Give differential diagnosis between ascites and ovarian dropsy.
10. Enumerate causes and treatment of amenorrhœa.
11. Enumerate causes and treatment of leucorrhœa.
12. Give causes and treatment of granular endometritis.

PRACTICE OF MEDICINE.

Causes of	{ 1 Typhoid fever.	{ 2 Emphysema.
	{ 3 Gout.	{ 4 Cerebritis.
Morbid anatomy of	{ 1 Chronic Bright's disease.	{ 2 Acute Pneumonia.
	{ 3 Chronic pleuritis.	{ 4 Empyema.
Diagnosis of	{ 1 Spasm of glottis.	{ 2 Tetanus.
	{ 3 Hydrophobia.	{ 4 Hysteria.
Symptoms of	{ 1 Typhoid fever.	{ 2 Malarial fever.
	{ 3 Catarrhal pneumonia.	{ 4 Tubercular peritonitis.
Treatment of	{ 1 Gout.	{ 2 Typhoid fever.
	{ 3 Emphysema.	{ 4 Chronic pleuritis.

SURGERY.

Causes of	{ 1 Hemiplegia.	{ 2 Pyæmia.
	{ 3 Erysipelas.	{ 4 Gangrene.
Pathology of	{ 1 Syphilis.	{ 2 Caries.
	{ 3 Iritis.	{ 4 Apoplexy.
Symptoms of	{ 1 Hip-joint disease.	{ 2 Septicæmia.
	{ 3 Strangulated hernia.	{ 4 Subcoracoid dislocation.
Diagnosis of	{ 1 Dislocations at elbow.	{ 2 Dislocations at hip.
	{ 3 Direct and indirect inguinal hernia.	{ 4 Empyema.
Treatment of	{ 1 Ligation of femoral artery in Scarpa's triangle.	{ 2 Hey's operation on foot.
	{ 3 Penetrating wounds of abdomen.	{ 4 Fracture of thigh.

*BY-LAWS of the Medical Examining Board of Virginia, ratified at its
Second Semi-Annual Session held at Fredericksburg, Va.,
October 26th, 27th, and 28th, 1886.*

ARTICLE I.

Section I.—{ OFFICERS.

The officers of the Board shall consist of a President, Vice-President, and Secretary and Treasurer (as provided by the "Medical Act"); also of a Committee on Chemistry, on Anatomy, on Hygiene and Medical Jurisprudence, on Physiology, on Materia Medica and Therapeutics, on Obstetrics and Gynæcology, on Practice of Medicine, and on Surgery; and of an Executive Committee, and a Committee on Legislation.

Section II.—{ ELECTION TO BE BY BALLOT—LENGTH
OF TERM—ELECTION: HOW CONDUCTED.

The President, Vice-President, and Secretary and Treasurer shall be chosen by ballot; shall, together with the other officers, continue in office for all or a part of four years, and until their successors are appointed and have qualified. In conducting any election, should more than two (2) members be balloted for for any office, the one having the smallest number of votes after the second ballot, or any subsequent ballot, shall be dropped. In all cases of election, the suffrages of a majority of the members present shall be necessary to constitute an election.

Section III.—{ PRESIDENT: DUTIES OF—PRESIDENT APPOINTS COMMITTEES AND SIGNS "CERTIFICATES."

The President, and in his absence the Vice-President, shall preside at all meetings, make from time to time suggestions as he may deem calculated to promote the welfare of the Board, and discharge all other duties pertaining by law and by resolution of the Board to his office. He shall preserve order and regulate the proceedings according to the most approved parliamentary laws, and shall demand conformity to the same by the individual members. He shall appoint all special and standing committees unless otherwise ordered by the Board, and shall sign his name as President to the certificate authorized to be issued by the Board.

Section IV.—{ SECRETARY: DUTIES OF—TO HAVE LISTS PUBLISHED—TO NOTIFY THE MEMBERS OF COMMITTEES—ALSO SECRETARY OF THE EXECUTIVE COMMITTEE—TREASURER: DUTIES OF—TREASURER GIVE BOND, ETC.

(a) The Secretary and Treasurer, as Secretary, shall keep true records of the general and special acts of the Board and all papers of value. He shall preserve a correct list of all who apply and stand the examination; and from time to time shall have published in some available source the official list, giving the names of those who pass, the number and not the names of those who fail, together with the names of the colleges from which all applicants have received their diplomas. When any general or special committee is appointed, he shall furnish the members of the committee with a copy of the *minute of appointment*, together with any essential document or information in his command. He shall conduct the correspondence of the Executive Committee, and shall, as Secretary, sign the certificate ordered to be issued by the Board; and discharge all other duties which pertain by law to his office.

(b) As Treasurer, he shall have charge of all money belonging to the Board; shall collect all money due, and disburse the same under order of the President and Executive Committee. Shall render full and faithful account of his official doings when requested by the Board, and shall give bond with sureties for the faithful performance of his duties in such amount as said Board may deem proper, and shall receive ten per cent. of the current receipts.

Section V.—{ EXECUTIVE COMMITTEE.

The Executive Committee (of which the President and Secretary shall be *ex officio* members) shall consist of five (5) members, elect its chairman, have authority to take such action as it may deem expedient on all subjects of importance to the interests and objects of the Board during its recess. It shall fill vacancies occurring during the interim of important and necessary officers; make all arrangements for the meetings, preparations for the speedy dispatch of business, hold the bonds of the officers and agents, employ counsel to prosecute and defend suits, and to advise the Board as to the correct interpretation of the law. It shall render a report of its action, shall make advisable suggestions, and discharge all other duties pertaining to its office not inconsistent with the law and resolutions of the Board.

Section VI.—{ EXAMINATION COMMITTEES: FORMATION OF— EXAMINATION COMMITTEES: HOW APPOINTED.

The Committee on Chemistry shall consist of four (4) members; the Committee on Anatomy of four (4); the Committee on Hygiene and Medical Jurisprudence of five (5) members, one of whom shall represent the Homœopathic School; the Committee on Physiology of four (4) members; the Committee on Materia Medica and Therapeutics of five (5), one of whom shall represent the Homœopathic School; the Committee on Obstetrics and Gynæcology of five (5), one of whom shall represent the Homœopathic School; the Committee on Practice of Medicine five (5), one of whom shall represent the Homœopathic School; and the Committee on Surgery of five (5) members, one of whom shall represent the Homœopathic School.

These committees shall be appointed by the presiding officer; each shall elect its own chairman, and shall report at the meetings of the Board the especial number of questions on their respective sections of such a length as a well-informed student can answer in the allotted time.

Section VII.—{ SELECTIONS OF QUESTIONS FOR EXAMINATION—CONDUCT OF EXAMINATION— VALUATION OF ANSWERS—PERCENTAGE OF QUESTIONS RENDERING EXAMINATION "SATISFACTORY."

The questions on the several subjects shall be presented to the Board, and after approval by the Board shall be presented by the respective committees as the examination for that meeting. During the examinations the committees shall have charge of the examination hall, and enforce the rules and regulations adopted by the Board, and adopt such others as they may deem proper. Each committee shall read and value the answers to the questions on its own section, and hand to the Secretary of the Board the complete papers with the valuations marked on them. No examiner is permitted to tell an applicant the result of his examination.

The applicant is required to answer at least *three-fourths* of the questions satisfactorily, and he is to be rejected if he fail to answer satisfactorily *thirty-three and one-third* per cent. of the questions on any one section or sub-division of the whole examination.

Section VIII.—{ COMMITTEE ON LEGISLATION— INTER-STATE.

The Committee on Legislation shall consist of three (3) members appointed by the presiding officer or the Board; and they shall consider all questions bearing upon State or Inter-State legislation. They shall report from time to time any changes in the law which they may deem advisable, and the relations that should exist between the Boards of adjoining States.

ARTICLE II.

Section I.—{ LENGTH OF SESSION, AND DISPOSAL OF TIME.

The session of the Board shall continue for two days. On the *first day*, from 9 until 12 o'clock shall be devoted to the Examination on Chemistry; from 12 until 3 to Anatomy; from 4 until 7 to Physiology; and from 8 to 11 Hygiene and Medical Jurisprudence. On the *second day*, from 9 until

12 to Materia Medica and Therapeutics: from 12 to 3 P. M. to Obstetrics and Gynæcology; from 4 to 7 to Practice of Medicine; and from 8 to 11 to Surgery.

Section II.—{ HOW THE QUESTIONS ARE TO BE GIVEN TO APPLICANTS—ANSWERS TO BE CALLED IN ON TIME—APPLICANT NOT TO LEAVE HALL EXCEPT.

All questions shall be written on a blackboard and placed in a conspicuous position within the examination hall, and at the expiration of the time allowed for that section the papers shall be called for, when each applicant shall hand up the whole or such part of the answers to the questions on said section as he may have written. Then the questions for the next section or sub-division of the examination shall be put up. No applicant shall be allowed to absent himself from the examination hall without the permission of the presiding officer until he shall have handed in his papers on the section then before the class.

Section III.—{ ANSWERS TO QUESTIONS TO BE SIGNED BY A NUMBER.

The applicant shall sign his papers with a number furnished him by the Secretary, who shall record the number after the applicant's name on his registered list to be kept for the purpose, and only the President and Secretary shall be allowed to examine the aggregate sheet during the examination.

Section IV.—{ NUMBER OF QUESTIONS TO BE ASKED—EXAMINATION BY INDIVIDUAL MEMBERS.

The number of questions to be asked on each section or sub-division shall be as provided in the *Question Blank*—Form III. This same number of questions shall always be asked by each examiner when conducting examinations during the interim of the sessions of the Board; and both examiner and examinee shall sign the *filled* Question Form before the examinee (applicant) begins to write his answers.

Section V.—{ EXAMINATION AS INDIVIDUAL MEMBERS—NO MEMBER TO EXAMINE UNTIL.

Members of the Board holding examinations during the recess of the Board shall, after examining and valuing the answers of an applicant to their questions, forward the same, together with the questions on the proper blank form, with valuations endorsed thereon, to the President of the Board.

No member of the Board shall examine an applicant until he is sure that said applicant has the permit of the President, countersigned by the Secretary and Treasurer, showing that the applicant has paid the fee required by law.

ARTICLE III.

Section I.—{ ORDER OF BUSINESS.

The order of business shall be as follows:

1. Opening of the meeting by prayer.
2. Reading of minutes of preceding meeting.

3. Calling of roll of members, and recording names of those present.
4. Reports of chairmen of sections.
5. Annual and special reports of officers.
6. Reports of special and standing committees.
7. Election of officers and committees.
8. Unfinished business.
9. Miscellaneous and new business.

Section II. —CHANGE ORDER OF BUSINESS.

The order of business may be changed by vote at any meeting.

Section III.—{SUSPEND THE BY-LAWS.

The by-laws may be suspended at any meeting by a vote to that effect of *three-fourths of the members present*.

Section IV.—}BY-LAWS AMENDED: HOW.

These by-laws may be amended by presenting the amendment, in writing, at any meeting, and allowing it to go over until the next meeting, when the amendment or any part thereof may be passed by a vote of *two-thirds* of the members present.

Section V.—}CONFLICTING MINUTES.

All minutes of this Board prior to approval of these by-laws, October 26, 1886, and in actual conflict with same, are hereby repealed.

AN ACT to Regulate the Practice of Medicine and Surgery.

1. Be it enacted by the General Assembly of Virginia, That there shall be for this State a Board of Medical Examiners, consisting of three members from each congressional district in the State, and two from the State at large, and in addition five homeopathic physicians from the State at large, whose term of office shall be four years, or until their successors are appointed and qualified. The term of office of the Board first appointed shall commence on the first day of January, eighteen hundred and eighty-five.

2. The said Board shall consist of men learned in medicine and surgery, and shall be appointed by the Governor on the first day of November, eighteen hundred and eighty-four, and every fourth year thereafter, from a list of names to be recommended by the Medical Society of Virginia. He shall also appoint five homeopathic physicians who may be nominated to him by the Hahnemann Medical Society of the Old Dominion, in the manner hereafter provided. Vacancies occurring in such Board for unexpired terms shall be filled in the same manner. Such recommendations shall be by the votes of a majority present at some meeting of the said societies, and the same shall be certified to the Governor by the President and Secretary of such meeting: provided, however, that in case the Governor shall consider any of the persons so recommended unsuitable, he may decline to

appoint such person or persons, and communicate the fact to the presiding officers of the society presenting the nomination, and such society shall, within ninety days thereafter, make other recommendations in the manner hereinafter prescribed, which shall stand on the same footing in all respects as those first made : and provided further, that if such society fail to make such recommendations prior to the time of appointment, or within ninety days, aforesaid, then the Governor shall appoint such Board, either in whole or in part, without regard to such recommendations. If any of said examiners shall cease to reside in the district for which he was appointed, it shall vacate his office.

3. The members of said Board of Medical Examiners shall qualify and take the usual oath of office before the County or Corporation Court of the county or corporation in which they shall respectively reside. The officers of said Board shall be a President, Vice-President and Secretary (who shall also act as Treasurer); said officers to be members of and elected by said Board. The first meeting of the same shall be at Richmond, at such time as the Governor shall notify the members by mail to assemble. Subsequent regular meetings shall be held at such times and places as the Board may prescribe, and special meetings may be held upon the call of the President and five members, but there shall not be less than one regular meeting per annum. Eleven members of said Board shall be a quorum. Said Board may organize at its first meeting, and may, at its first or any subsequent meeting, prescribe rules, regulations, and by-laws for its own proceedings and government, and for the examination of candidates for the practice of medicine and surgery by its individual members.

4. It shall be the duty of said Board, at any of its meetings, and of the individual members of said Board, at any time, to examine all persons making applications to them, who shall desire to commence the practice of medicine or surgery in this State. When the examination is by an individual member of the Board, he shall report the result of the same to the President thereof; and when an applicant shall have passed an examination satisfactory as to proficiency, before three individual members of said Board, or before the Board in session, the President thereof shall grant to such applicant certificate to that effect. A fee of five dollars shall be paid to said Board, through such officers or members as it may designate, by each applicant, before such examination is had. In case any applicant shall fail to pass a satisfactory examination before the Board or before the three individual members to whom he shall first apply, he shall not be permitted to stand any further examination within the next three months thereafter, nor shall he have again to pay the fee prescribed as aforesaid; provided, however, no applicant shall be rejected upon his examination on account of his adherence to any particular school of medicine or system of practice, nor on account of his views as to the method of treatment and cure of diseases.

5. The fund realized from the fees aforesaid shall be applied by the Board toward its expenses, including a reasonable compensation to the President and Secretary.

6. Any person who shall obtain a certificate as aforesaid from the President of said Board shall cause his name to be registered in the clerk's office

of the County or Corporation Court for the county or corporation in which he shall reside; and it shall be the duty of said clerk to register the name of every such person, describing such certificate, together with the date thereof, and the name of the President of the Board, signing the same in a book kept for the purpose, as a part of the records of his court, which shall also give the date of each registration; and his fee for each registration shall be one dollar, to be paid by the person whose name is registered.

7. No person who shall commence the practice of medicine or surgery after the first day of January, eighteen hundred and eighty-five, shall practice as physician or surgeon for compensation without having first obtained a certificate and caused his name to be registered as aforesaid. Any person violating the provisions of this section shall pay a fine of not less than fifty nor more than five hundred dollars for each offence, and shall be debarred from receiving any compensation for service rendered as such physician or surgeon.

8. Any person who shall have been assessed with a license tax as a physician or surgeon by any commissioner of the revenue in this State at any time prior to the first day of January, eighteen hundred and eighty-five, shall be taken as having commenced the practice of medicine or surgery prior to that date; but any person who shall not have been so assessed shall be taken as not having commenced such practice prior to that date.

9. Any physician or surgeon who shall commence to practice after the first day of January, eighteen hundred and eighty-five, and who shall reside in an adjoining State, within ten miles of the boundary line of this State, shall be entitled to stand the examinations and receive the certificate hereinbefore provided for, and such certificate shall be registered as hereinbefore provided, in that county in this State which is nearest his place of residence, and such certificate and registration shall make it lawful for him to practice medicine or surgery.

10. Nothing in this act shall be taken as including or affecting in any way the practice of dentistry, nor shall it include physicians or surgeons residing in other States and called in consultation in a special case with a physician or surgeon residing in this State. Nor shall it be construed as affecting or changing in any way the laws in reference to the license tax to be paid by physicians, surgeons and dentists.

11. Provided, the provisions of this act shall not apply to any midwife.

AN ACT to Provide for the Mode of Applying for Licenses to Transact any Business in this State, Approved March 6th, 1886.

§ 89. No person shall, without a license authorized by law, practice as attorney-at-law, physician, surgeon, or dentist, and no person who shall hereafter apply for license to practice as a physician or surgeon shall have such license granted to him unless he shall have complied with the provisions of an act entitled an act to regulate the practice of medicine and surgery, approved January thirty-first, eighteen hundred and eighty-four: provided, that no person who was licensed to practice as physician or surgeon, at any time prior to January the first, eighteen hundred and eighty-five, need comply with the provisions of said act in order to be again licensed as a physician or surgeon.

Original Translations.

From the French. By R. M. SLAUGHTER, M. D., Theological Seminary, Va.

M. Pasteur's Latest Treatment of Hydrophobia.—According to *La Tribune Medicale* of November 7th, 1886, on the 26th of October, 1885, M. Pasteur informed the Academie de Medicine of Paris of a new prophylactic treatment for hydrophobia. Numerous trials upon dogs had encouraged him to try it upon men. Up to the 1st of March, 350 persons, bitten by mad dogs, and some others who had been bitten by dogs supposed to be mad, were treated at his laboratory by Dr. Grancher. Up to October 31st, 1886, 2,490 persons have come to Paris to undergo treatment. This treatment was at first the same in the great majority of cases, despite the diverse conditions of age, locality and depth of bites, and the length of time elapsed in the interval between the reception of the bites and the beginning of the treatment. The length of treatment in all cases was ten days; each day the patient received one injection of the fluid preparation of the spinal cord of the inoculated rabbit, beginning with a cord fourteen days old, and terminating with one five days old.

These 2,490 persons are thus classed as regards nationality: England, 80; Austria, 52; Germany, 9; Belgium, 57; Spain, 107; Greece, 10; Holland, 14; Italy, 165; Portugal, 26; Russia, 191; India, 2; Roumania, 22; Turkey, 7; Switzerland, 2; United States, 18; Brazil, 3; France and Algeria, 1,726.

Of the more than 1,700 French persons treated, there were ten cases in which the treatment proved inefficacious. Of these ten, six were children; one a woman of seventy years of age, two men of thirty, and one of eighteen years of age. M. Pasteur does not take into consideration two other cases, in which death may be attributed to their too late arrival at the laboratory. In one of these cases, death occurred thirty-six days after the reception of the bite, and in the other, thirty-six days after. Ten deaths in 1,700 cases (or one in 170) is the result of the treatment for France and Algeria in the first year of its trial.

These statistics show the efficacy of the method of treatment—an efficacy equally well demonstrated by the number of deaths—relatively very large—of persons bitten and *not*

vaccinated. It can be affirmed with certainty that a very small number of those persons who have been bitten in France during this year (1885-'86), have failed to come to M. Pasteur's laboratory. In this small minority there have been, to his knowledge, ten deaths from rabies. The number of persons who have died from this disease in the Paris hospitals, especially, during the last five years, is quite precisely known. By order of the Prefect of Police, all cases of hydrophobia presenting themselves at the hospitals are immediately reported to Dr. Dujardin-Beaumetz, member of the Board of Health, whose duty it is to make inquiry, and report to the Board. It is thus definitely known that sixty cases of hydrophobia have died in the Paris hospitals in the last five years—an average of twelve a year. In no year has there been no death. Last year there were twenty-one. But, since November 1st, 1885, when the preventive method of treatment was begun to be practiced at M. Pasteur's laboratory, there have been only two deaths from hydrophobia in the hospitals, of persons not inoculated, and one who had been, though not by those extensive and repeated treatments of which he is presently going to speak.

It is to be noted that the larger number of those who succumbed in spite of the treatment, were children, and had been bitten about the face. These children were submitted to the simple treatment. M. Pasteur is now convinced that this treatment is insufficient for bites of this nature. Unfortunately, this conviction could only be acquired slowly, for long delays were necessary to reach a conclusion in cases of exceptionally long stages of incubation.

The history of the cases of the Russians of Smolensk was the first lesson. When Dr. Grancher and he saw three of these nineteen Russians, three who had been bitten by a mad dog died at the Hotel Dieu—the first while undergoing treatment, the others some days after the completion of their course of treatment—these gentlemen were much troubled. Would the remaining sixteen succumb to the disease? Was the method powerless against the rabies of the wolf? They then remembered that in the cases of all the dogs successfully vaccinated, the last inoculation had been with a virulent marrow extracted on the very same day, and in the treatment of the first person vaccinated, the last inoculation was with a marrow of the preceding day. They then submitted these sixteen Russians to a second and a third course of treatment, continuing until very fresh marrow, as those of the fourth, third and second days, were used. It is to

these repeated treatments that must be attributed the very probable cure of these Russians. A dispatch, received October 31st, announced that they are now in good health.

Encouraged by these results, and by new experiences, which will presently be related, M. Pasteur has modified the treatment, by making it more rapid, and, at the same time, more active in all cases, and particularly so for those having bites upon the face, or deep and multiple bites upon uncovered parts. For this variety of cases he hastens the inoculations, and comes quickly to the use of freshest marrows. Upon the first day, he inoculates, for example, with marrows of twelve, ten and eight days, at twelve, four and nine o'clock; on the second day, with marrows of six, four and two days, at the same hours; the third day, with those of one day. The treatment is then repeated by inoculating on the fourth day with marrows of eight, six and four days; on the fifth day, with those of three and two days; on the sixth day, with one of one day. On the eighth day he uses one of three days; on the ninth day, one of two days, and on the tenth day, one of one day. It will thus be seen that three courses of treatment are employed, each ending with the inoculation of very fresh marrows.

If the bites have not healed, or if the bitten person is late in coming for treatment, he allows an interval of two or more days between, and again repeats these courses of treatment until he reaches the period of the fourth and fifth week, which is the dangerous one for children bitten on the face.

For the last two months this mode of vaccination for persons severely bitten, has given, up to the present time, very favorable results. Ten children, who were severely bitten in August last, have received this intensive treatment. As it is rare for the dangerous period in children bitten about the face to last more than four to six weeks, he is confident that these ten children are safe from danger.

Hysterical Anuria Accompanied by Secretion of Urine by the Stomach.—In an article on this subject, Dr. Rossoni makes the following statements:

1st. Anuria is not a rare symptom in hysteria. This anuria is established by a peculiar interchange which takes place in the system, the nature of which has escaped us.

2d. In hysterical cases with anuria, the stomach can be the seat of a more or less abundant secretion of a liquid which presents all the physical and chemical properties of urine.

3d. The urinary secretion of the stomach may be arrested

without the re-establishment of that of the kidneys. Complete anuria can last two months.

4th. Pilocarpine may in some cases hasten the renewal of the function of the kidneys. In some hysterical cases it may occasion, on the part of the salivary glands, the secretion of a fluid having the same physical and chemical properties as urine.

5th. Urea artificially introduced into the circulation of a hysterical anuric, who does not secrete urine by the stomach, causes uræmic troubles.

6th. On the contrary, urea can be artificially introduced into the circulation with impunity, in doses of sixteen grammes in hysterical patients who are subject to urinous vomitings.

7th. There is no identity between hysterical anuria and uræmia from nephritis, absence of the kidneys following nephrotomy and ligature of the ureters.—*Le Practicien*.

Salol.—M. Boismont read before the Société de Thérapeutique a report on salol. This agent is composed of salicylic acid and phenol, in the proportion of sixty parts of the former to forty parts of the latter. It is a white crystalline powder, without smell or taste, insoluble in water, but soluble in alcohol and ether.

It has been tried by M. Sahli. He finds that it has an anti-rheumatic and anti-pyretic effect, similar to that of salicylic acid or salicylate of sodium. But it has the advantage of exerting, as is the case with these remedies, no bad effect upon the stomach. It breaks up only in the intestines, and acts as an energetic anti-putrid agent. It is eliminated by the kidneys, and can be detected in the urine by the addition of the perchloride of iron, which gives violet coloration. It is given in powder, in capsules, to the amount of from four to eight grammes a day.—*Le Practicien*.

Fehling's Solution in Urinary Analysis.—M. Jolly Fehling's solution can show the presence in the urine of peptones, glucose, or an excess of phosphoric and uric acids.

A. Put in a test-tube one part of Fehling's solution and ten parts of urine and heat until boiling begins:—

1. The liquid remains blue—*no indication*.
2. The liquid is discolored by a pale yellow, flocculent precipitate, the liquid having an amber color—*peptones*.
3. The liquid takes on an orange tint; after some moments an orange precipitate is formed—*glucose*.

B. Take equal parts of Fehling's solution and urine, and carry to boiling point:—

1. The liquid changes a little in color; after some moments standing, the clear liquid remains blue and the precipitate is a bluish gray—*small quantities of uric acid.*
2. The clear is green and the precipitate greenish grey—*excess of uric acid.*
3. Precipitate in small quantity—*a little phosphoric acid.*
4. Precipitate very abundant—*very considerable quantity of phosphoric acid.*
5. The liquid takes an orange tint; on standing, the clear portion of the liquid takes a brown tint; the precipitate changing to red—*glucose.*

C. Take five parts of the solution and one of urine, and heat to boiling:—

1. The liquid does change color—*no indication.*
2. The liquid takes a color varying from dull greenish yellow to vivid orange—*glucose.*

A Strange Tampon[?]—A physician writes to the *Deutsche Medizinal Zeitung* that he recently received a call to a peasant woman who was suffering with hæmorrhage from the genital organs. Upon arrival, he found the vagina filled with fresh horse dung, and the external parts covered with the same. The patient would not accept treatment, and refused to allow this singular tampon [?] to be removed. A short time afterward she had an attack of septicæmia.—*Le Practicien.*

Nature and Treatment of Bright's Disease.—In a recent number of *L'Union Medicale du Canada* we find the following statement of the views of Prof. Semmola (of Naples) on the nature and treatment of Bright's disease, which we think worth reproducing:

Bright's disease is a general derangement of nutrition, caused by the prolonged influence of damp cold upon the skin, in consequence of which, the albuminoids of the blood, becoming abnormally diffusible and unassimilable, pass out by the kidneys; but at first, that organ presents no anatomical lesion. After a certain time, however, this passage of albumen through the kidneys causes therein the lesions of diffuse nephritis. At the same time that albumen appears in the urine, it also appears in the other emunctories; there is an *albuminocholia*.

Bright's disease has been produced in dogs by Prof. Semmola, by subcutaneous injections of the whites of eggs. By this process the following effects are produced, after fifteen

or twenty days: Albuminuria; albuminous dyscrasia, with progressive diffusibility of the albumen of the blood; diminution of the production of urea; dropsy; nephritis. This experiment is wanting in only one particular, and that is the primary influence of an impairment of the function of the skin, which cannot be artificially produced.

Prof. Semmola avails himself, however, of the clinical features of scarlatina to prove the pathogeny of albuminuria. The albuminuria, which appears in scarlatina, when the disease is at its termination, when the patient is undergoing desquamation, and is in full convalescence, is not the result of an infectious nephritis from the elimination of microbes. It results from a diminution of the functional activity of a skin affected by the scarlatinous process. During the acute period of the disease, as the patient drinks only a little milk, a perfect equilibrium is kept up between the weakened cutaneous function and the quality as well as the very small quantity of albumen ingested. But, when complete alimentation is again begun, before the skin has time to revive its function, the blood becomes surcharged rapidly with an excessive quantity of albuminoids, which, not being assimilated, escape by the kidney. The same result can be brought about by a sudden chilling of the skin, in spite of the persistence in a strict dieting.

With regard to the cutaneous lesions which exist in Bright's disease, which have been hitherto little studied, they are, indeed, worthy of attention. There is an atrophy of the layer of Malpighi with proliferation of the connective tissue of the dermis and atrophy of the sudoriferous glands.

He concluded that Bright's disease should not be classed as a nephritis, but as a pathological type of the class of diseases of nutrition, as clearly shown by its etiology, the slowness of its development, the progressive diminution in the process of the combustion of albuminoids, and finally a diffuse nephritis, the typical form of which is the large white kidney. For a long period, however, it is curable, if all necessary means are used to restore the elements of the skin. He sums up the following line of treatment for the disease during the long period of its curability:

1st. An exclusive milk diet. Nitrogenous foods should be prescribed at all stages of the disease, and especially the highly nitrogenous articles of diet. Milk acts in a wonderful manner on victims of Bright's disease. It acts only as a model aliment, and not as a diuretic. The milk diet should be kept up for a long time, and, only with exceptional pre-

caution, should be tried the tolerance of meat or yellow of eggs.

2d. Methodical and repeated applications to the skin of dry friction, massage, the Scotch douche, and often, too, sweatings by means of the sweating-room. Cold hydrotherapia must be rejected. It is always badly borne by patients, even in the beginning of the disease, on account of the difficulty of getting the effects of cutaneous reaction. For the same reason violent muscular exercise is harmful.

3d. The patient should live in a medium temperature—dry and constant. In winter, especially in variable climates, the patient should not go into the open air, but should take exercise in a room with the temperature at 18° to 20°C . (64° – 68°F .)

4th. Administration of the iodide and chloride of sodium in increasing doses according to tolerance.

5th. When, after two or three weeks or more, if the albumen has not yet entirely disappeared from the urine, and above all, when the anasarca is completely ended, it is necessary to substitute for the iodide of sodium, either the phosphate of sodium or small repeated doses of the hypophosphate of sodium or lime, to the amount of three or four grammes in the twenty-four hours.

6th. The methodical employment of inhalations of oxygen.

7th. Renounce the employment of astringents not only as useless, but as hurtful remedies.

The Chemical Composition of Man.—From a chemical point of view, man is composed of thirteen elements, of which five are gases and eight are solids. If we consider the chemical composition of a man of the average weight of 154 pounds, we will find that he is composed in large part of *oxygen*, which is in a state of extreme compression. In fact, a man weighing 154 pounds contains ninety-seven pounds of oxygen, the volume of which, at ordinary temperature, would exceed 980 cubic feet. The *hydrogen* is much less in quantity, there being less than fifteen pounds, but, which, in a free state, would occupy a volume of 2,800 cubic feet. The three other gases are *nitrogen*, nearly four pounds; *chlorine*, about twenty-six ounces, and *fluorine*, three and a quarter ounces. Of the solids, *carbon* stands at the head of the metalloids, there being forty-eight pounds. Next comes *phosphorus*, twenty-six ounces, and *sulphur*, three and a quarter ounces. The most abundant metal is *calcium*, more than three pounds; next *potassium*, two and a half ounces; *sodium*, two and a quarter ounces, and lastly, *iron*,

one and one-quarter ounces. It is needless to say that the various combinations made by these thirteen elements are almost innumerable.—*Le Practicien*.

Pyridine Inhalations in Asthma.—Prof. G. Sée, in *La Union Médicale*, says that if four or five grammes (about one drachm) of pyridine be poured on a plate and placed in a room containing about 875 cubic feet of air, and the patient—be the form of his disease either neuropathic or cardiac—remain in this room twenty or thirty minutes three times a day, after two or three sittings, the wheezing will diminish or disappear, the expectoration will become much looser, and he will enjoy repose, either with or without sleep. In some cases the improvement persists. In others the effects of the inhalations last about six to ten days. When this is the case, the iodide treatment must be added. This treatment is very efficacious, but in some persons it causes the pneumonia of iodism, and its usage has to be stopped.—*Le Practicien*.

S. Dandien, in *La Tribune Médicale*, endorses the opinion of Prof. Sée as to the value of pyridine inhalations, and also adds that it may be used by placing five or six drops on a handkerchief and inhaling. The disagreeable smell may be masked by essences, such as those of thyme, verbena, citronnelle, etc.

Analyses, Selections, etc.

Abandon Intra-Uterine Medication.

In a paper by Dr. Thomas Addis Emmet, of New York, read in the Section of Obstetric Medicine, at the annual meeting of the British Medical Association, in Brighton (*Brit. Med. Jour.*, Nov. 13th, 1886), he stated that for years he has taught that the key to diseases of women is to be found *outside* of the uterus, and that this organ is not prone to take on disease, *except in connection with new growth, or as the result of injury during childbirth*. He therefore attributes great importance to pelvic inflammations, and their bearings on the pathology of female diseases. Thus a uterine displacement is not always a primary difficulty; a version is often but a symptom, and a flexure but an exaggeration of a version. Mechanical dysmenorrhœa is therefore a myth, and hence a supposed cervical stenosis is of little importance in connection with menstruation. Vaginal and cervical dis-

charges, in the absence of gonorrhœa, are due, as a rule, to an effort of nature to relieve an obstructed or an impaired circulation in the pelvic, cardiac or portal system.

From this view we recognize that the uterus *must* become retroverted and prolapsed with any inflammatory change in one or both broad ligaments, and, as a rule, the uterus becomes extremely anteverted when the utero-sacral ligaments become involved; but where an unusual degree of prolapse had previously existed, the version then becomes a backward one. The inflammation extends to the peritoneal surfaces in Douglas' cul-de-sac; and as adhesions form, the uterus is drawn even backwards, and fixed in this position. Hence, remove the inflammation *before* attempting to replace a retroverted uterus.

A pessary can accomplish little by simply changing the version; for, in a state of health, Dr. Emmet holds, the mere version is often immaterial.

When a pessary is properly used it will correct a prolapse, but give relief only indirectly, by "taking in the slack," as it were, of the relaxed or overstretched fascia and connective tissue of the pelvis.

With the adhesions accompanying a local peritonitis, undue traction is exerted on one part, with the effect of relaxing the tissues in another. The benefit, then, to be derived from the pessary is that the fascia and connective tissue are thereby enabled to give the proper support to the blood-vessels, thus diminishing their calibre, and lessening the congestion throughout the pelvis. *Diminishing the quantity of blood*, therefore, gives the relief, and not the change of version.

When an enlarged uterus is anteverted, and accompanied by irritability of the bladder, this and other kindred symptoms are not due to the version, but to the degree of prolapsus. Any means fitted to correct the prolapse of the cervix, and to lift it to the proper plane in the pelvis, where the circulation could go on unobstructed, will relieve the symptoms, notwithstanding the degree of version may be thereby greatly increased. This is shown in the relief from the symptoms attributed to anteversion when, by a long lever-pessary, with sufficient curve behind to lift the cervix well up in the pelvis, the result is obtained, notwithstanding the position of the fundus may remain unchanged.

In corroboration, we have the same train of symptoms as those accompanying prolapse, when the uterus is lifted proportionately high in the pelvis. In both instances, the neck

of the bladder is bound down by the subpubic ligament, and, being the only real fixed point in the pelvis, traction in a special line will excite a desire to empty the bladder, without reference to the version of the uterus.

A retroversion is often congenital, and the female will be unconscious of the malposition so long as she remains free from pelvic inflammation. In the congenital absence of the posterior *cul-de-sac* of the vagina, an inflammation is frequently established as a consequence of efforts to correct a supposed deformity when the backward version of the uterus is the natural one for that individual.

A flexure of the body of the uterus is closely connected with an obstructed circulation, and has its cause in pelvic peritonitis, which at the same time intensifies the version.

Many instances of exaggerated dysmenorrhœa occur where the largest-sized sound could be passed to the fundus without difficulty. Years ago, when it was the practice to apply caustics to an erosion, with the object of healing a supposed ulceration, it was not rare to see the os become eventually reduced in size to a minute opening. Dr. Emmet has placed such a woman in Sims's position while she was menstruating, and through the speculum has watched the escape of blood, drop by drop, from an opening too minute to be readily found at any other time; and yet, if there existed no pelvic inflammation, or impaired nutrition, the process was free from pain.

Dysmenorrhœa is certainly not due to flexure of the uterine body, for it is common to observe all degrees of deviation where the menstrual flow takes place without pain. Dysmenorrhœa and flexure frequently exist together, but their association is an accidental one, though both may due to a common cause. Dysmenorrhœa is a symptom merely, and one generally of perverted or impaired nutrition, the fault lying in the nerve-centres, and not in the uterus or its appendages. An anæmic girl, whose nervous system has been unduly taxed by over-study, or other cause, will often suffer from dysmenorrhœa, whether her uterus be straight or flexed.

Under favorable circumstances, and with care, gradual dilatation may be carried out by means of graduated steel sounds. But why employ forcible dilatation, even with the object of lacerating the tissues of the cervix, as has been recently practiced? If no other evil followed this practice, and there are many, Dr. Emmet still protests. But a new danger is to be anticipated.

During the past spring he was consulted by a woman whose cervix had been forcibly dilated two years before and purposely lacerated, with the object of keeping the canal open, for the purpose of curing dysmenorrhœa and sterility, due, it was thought, to stenosis, but the two conditions had resulted from an old pelvic peritonitis. She was very ill from inflammation after the operation, and never regained her health. Dr. Emmet found in the cleft of a triple laceration of the cervix an epithelioma springing up, and it developed rapidly within a few days. If there is a point in gynæcology clearly defined from his experience, and from the observation of others placed apparently beyond dispute, it is the close relation, as by cause and effect, between the injury resulting from laceration or division of the cervix uteri and the development of epithelioma. This is the first instance, it is true, in which he has known that disease to follow division or forcible dilatation.

There seems to be, occasionally, a temporary improvement in the dysmenorrhœa after the cervix has been incised, or after the canal has been gradually dilated; but this apparent benefit is due solely to the revulsive effect of the operation, and no especial harm is done unless septic poisoning takes place. If this does occur, the pelvic inflammation becomes intensified, and life is placed directly in jeopardy, or is rendered more miserable than before.

Dr. Emmet has met also with instances where the Fallopian tubes happened not to have been involved in the neighboring inflammation, and pregnancy has followed dilatation of the cervix, without lighting up the old pelvic trouble. The effect has been the pelvic inflammation of long standing has been removed gradually through the new action, or revulsive effect, established in consequence of the advancing pregnancy. But this result is not the rule, and is a very rare solution of the difficulty. During his early connection with the Woman's Hospital, he was an advocate for division of the cervix, and practiced dilatation for the relief of dysmenorrhœa. But he became convinced that the practice was an irrational one; that it did a great deal of harm as a rule; and, unless an accidental pregnancy supervened, no one was ever cured permanently by it.

An overlooked pelvic inflammation is a frequent cause of irregular loss of blood from the uterine canal, and sometimes the absence of the menstrual flow is due to the same cause. Often the curette is used empirically in blindly scraping tissues from the uterine canal which have become only sod-

dened from a hyper secretion, due to the obstructed pelvic circulation. The difficulty is often increased by the ignorant use of ergot, when given in large doses. The effect is to increase the pelvic congestion, and though the loss of blood may sometimes be temporarily checked, it is only done by kindling afresh the existing pelvic inflammation.

Many a pelvic peritonitis has been set up, and complicated adhesions have been formed, through the injudicious use of ergot. It is common to mistake a small ovarian tumour for a fibroid, as, at this stage of its growth, a loss of blood is a frequent symptom of the former disease. In this condition, and without a knowledge of the consequences, ergot is often administered as well as where a fibroid is so situated that no expulsive power of the uterus could act upon it. In point of fact, ergot, in large or ordinary doses, does not act in any way upon a uterus which is not enlarged, or whose canal is not dilated, and its only action, where these conditions are not present, is to increase the pelvic congestion. Unless the os is dilated; and a fibroid is so situated that, with the aid of gravity, it can be expelled, it is bad practice to administer ergot, except in minute doses. In such doses, and by long-continued use, its action, through the ganglionic system, is as a tonic on the muscular coats of the blood-vessels situated in erectile tissue, and is thus most useful in the treatment of old pelvic inflammations.

Here exists a condition which beautifully illustrates the action of hot water when administered by vaginal injection. If the injection be given in the recumbent position, while the pelvis is elevated, very hot water used, and the injection prolonged for a sufficient time, the loss of blood will be arrested by the reflex action thus exerted upon the capillaries. On the other hand, if the menstrual flow be arrested or absent from over congestion, a flow will again take place as soon as the hot water shall have excited contraction enough to bring the circulation within the proper limits, and this can be aided by other efforts to increase the action of the skin.

We possess no more efficient means for relieving dysmenorrhœa than the proper administration of these hot water injections, if they be continued at short intervals from the first pain, and until relief is obtained. But this agent could have no effect in relieving dysmenorrhœa if the latter were due to any mechanical cause, such as flexure, or to the existence of a partial stenosis.

In the absence of malignant or specific disease, and of

new growths, we may feel satisfied that an existing discharge from the uterine canal is not due to a diseased condition of its lining surface. And these conditions excepted, we hold that inflammation of the uterine tissue itself does not occur except during the puerperal state, when we have metritis, and it is easy to demonstrate, by its products, that it is then one of active inflammation. No such condition, however, can exist in the non-puerperal state, and after death we may look in vain for any evidence of so-called chronic metritis, endometritis, or endo-cervicitis. These conditions, therefore, Dr. Emmet believes, do not exist, except in theory.

The discharges from the uterine canal, under ordinary circumstances, are due to extraneous causes, and the most common is some obstruction in the venous circulation attending an old pelvic inflammation. There is a constant tendency to resolution, from the great reparative changes in tissue attending each menstrual period. Granting that at this time the whole of the epithelial surface lining the uterine canal is not removed or replaced, certainly a large portion is thrown off; and under such circumstances, "endo-metritis" could not exist but for a limited period. The most extensive erosion recognized during life cannot be found after death, as there is no loss of tissue; the tissues involved therein then become blanched, owing to the emptying of the capillaries. It is thus shown that the leakage, or over-secretion, is due to an obstructed circulation outside of the uterus. Even when the discharge seems to be due directly to an injury, as from the surface of a lacerated cervix, the rule still holds good. But for the septic inflammation set up at childbirth, and the continued obstruction afterwards to the circulation, as a consequence, the lacerated surface would promptly heal soon after the reception of the injury, and no ill effects would arise. Therefore, the cervical discharges are kept up afterwards by the existing pelvic inflammation; but, as soon as the circulation can become restored to a normal state, by the disappearance of the inflammation, and by the rupture or puncture of the distended mucous follicles, all excessive secretion will cease, and the raw surface will rapidly heal.

Holding these views in relation to the cause of the discharge from the uterine canal, Dr. Emmet abandoned the practice of internal applications, and he believes that he was the first to do so. During the past seven years, he has not made, in ordinary practice, an application of iodine within the uterine canal. He has only resorted to the practice, in a few instances, for the introduction of Churchill's iodine to

arrest a loss of blood, and when he felt satisfied that the hæmorrhage was due to granulations, or to some growth within the canal. He avoids, if possible, the introduction of any instrument or remedy within the uterus. He has not owned a sound for years, and his uterine probe has been broken for fully eighteen months—both instruments having become useless to him since he acquired any knowledge of bi-manual palpation.

Last year, he obtained the average time under treatment of all the non-surgical patients admitted in his hospital previous to 1879, in whom any pelvic inflammation had been detected. Then he took the average on all those treated under like circumstances, and who had been admitted since that time. The patients who had been admitted since he abandoned the use of internal applications to the uterine canal had averaged forty-eight days, or nearly seven weeks, less time under treatment than those treated in the usual manner. Accepting these facts, the deductions to be drawn from them are significant. He can recall clearly the condition of a number of patients under his care years ago, where he considered the existing pelvic inflammation as insignificant in importance as the recognized extent of the disease seemed to be. Yet these women were often under treatment year after year, and each relapse, with a fresh increase of inflammation, was then attributed to exposure to cold, or to some imprudence on the part of the patient herself, but never to the mode of treatment.

The surface of the uterine canal is, beyond question, a most ready absorber of any remedy, however applicable; but its connection, or contiguity, or sympathy with the peritoneum, is too close to make the practice safe. To substitute, for the uterine surface, the more extended vaginal one, for the application of any agent which would be suitable for introduction within the uterus, is a positive gain.

The better results obtained during the past six or seven years, referred to above, can only be attributed to a greater appreciation of the different shades of pelvic inflammation, and a knowledge of their relative importance. So far as the general principles of treatment are concerned, he knows no other special change unless it be that he now pays closer attention to the details of general treatment, where formerly he relied much more upon local means.

The chief change in local treatment has consisted in giving up medication to the uterine canal. But an advance, no less important, has been made in the more judicious and

more limited use of pessaries. Consequently, there have been but few instances of lighting up again the old pelvic trouble, since the displacement of the uterus, as regards the version, has been allowed to remain unchanged until the inflammatory cause has been so far removed that the uterus has gradually returned to its natural position, or the use of a pessary has been rendered both safe and of advantage. But, while the version is thus to remain unreduced for a time, it is necessary, throughout the course of the treatment, to correct the prolapse, as far as possible, by the use of cotton-wool pledgets, saturatad in glycerine. This will fully test the skill of the operator, as to the proper position of the pledgets, and as to the plane in the pelvis to which it would be safe to lift the uterus, without exciting fresh inflammation, and where the circulation would be the least obstructed.

He has made, purposely, no reference as to the especial form of pelvic inflammation which is supposed to exist. We have phlebitis and cellulitis, lymphangitis and peritonitis, existing alone or together. Cellulitis seems to be the most common form of inflammation met with, and one tending to rapid recovery, if septic poisoning do not occur. But the space in the pelvis is a very limited one where a cellulitis could exist to any extent without involving, by contact, more or less of the peritoneum. In time, the inflamed connective tissue seems to disappear, as if absorption; and, when a pelvic inflammation has been of long standing, the condition then found must necessarily be more characteristic of an old peritonitis.

The chief purpose of this paper has been to show the necessity for abandoning the use of internal medication to the uterine canal, except under the conditions already specified.

Castor Oil a Powerful Alterative.

We were very much interested in a personal letter recently received from Dr. Henry V. Gray, of Roanoke, Va., in which he stated that he was experimenting with this old domestic remedy (castor oil) to determine its real value as a therapeutic agent. His experiments thus far conducted have been highly favorable to it "as probably the most powerful alterative known—at least in the diseases of the glandular system." But he will not, as yet, "so highly color it, or give it such scientific significance as to infer that its action is due to magnetism in any form." He notes the following cases:

"Lady, 45 years old, with *large chronic goitre*; directed her to rub castor oil in freely over the goitre, several times a day, for six weeks—rub in with the hand. At the end of the time, the goitre had entirely disappeared.

"2nd Case.—I was called to a child with convulsions; observed a large *swelling under each ear*. I used usual remedies for the convulsions, which were relieved. I ordered also castor oil to be rubbed in freely over each of the swellings. On the third day thereafter the swellings had disappeared. [Diagnosis of the "swelling" not defined.]

Case 3.—*Diphtheria with swelling of cervical glands*. After using usual treatment for several days without any observable improvement, I ordered the outside of the throat to be rubbed with castor oil. On the third day, the swelling was all gone, and the diphtheritic patch in the throat likewise had disappeared.

"4th Case.—*Extensive swelling of the feet after typhoid fever*. This case had lasted some two months. I directed the feet and legs to be massaged well with castor oil every day, and in one week's time all swelling had disappeared. In this case massage had been freely resorted to, but without effect."

"I have a number of other cases on hand under castor oil treatment, and will give the results at some future time. I shall try the oil alone, internally and externally, in ulcerations of all kinds, glandular swellings, and shall test its value by massage and by spray, or by what I might term percolation into the windpipe in consumption, scrofula, syphilis, rheumatism, gout, post-nasal catarrh, etc., and shall, if I find it necessary, combine it with iodine, carbolic acid, mercury, etc."

"This may all be imagination, but no one will more freely confess an error of this kind than myself. In consumption, I want to bring the oil in direct contact with the diseased lung tissue (by intra-pulmonary injections, pneumatic apparatus, inhalers, etc.)

Value of Coca Preparations.

Surgeon-Major H. Liebermann, of Paris, officer of the Legion of Honor, etc., contributes a note on this subject to the *New York Medical Monthly*, in which he speaks especially of *Vin Coca Mariani*. During his long career as a military surgeon, he says he has used this preparation with the greatest success in "profound anæmia," resulting from arduous

campaigns in tropical countries, and in gastro-intestinal irritation, with loss of appetite and dyspepsia, which frequently accompany this condition. Two or three wine-glasses a day of *Vin Mariani* relieved the debility wonderfully and rapidly, restoring the appetite and removing dyspepsia. He thinks this wine vastly superior to wine of quinine, since the latter augments the gastro-intestinal irritation, interferes with alimentation, retards repair, and thereby aggravates the anæmia. Also in chronic alcoholism following the abuse of absinthe and strong liquors, Mariani's wine, while primarily producing some cerebral stimulation, exercises a predominant sedative effect upon the nervous system. He has seen hardened drunkards give up their pernicious habits and return to a normal condition under this treatment. He has also employed Marani's wine successfully in tobacco habit. A few small swallows replaced both pipes and cigars, since the patients unconsciously receive the cerebral stimulation sought for. In chronic bronchitis, and even in pulmonary phthisis, Mariani's wine increases the appetite and diminishes the cough. For the cough he gives a wine-glassful, mixed with a tumbler of spring water. In convalescence from typhoid fever, especially where the gastric irritability would not tolerate even Bordeaux wine, he has used this wine with great success. In short, Dr. Liebermann believes Mariani's wine is a most potent help to the military surgeon to combat with sickness, infirmities and vicious habits engendered by campaigning and the hardships of military life. Whenever any other preparations of coca were used, the intended results were not produced; even bad effects and complications were noticed.

WM. E. BURNETT, M. D., Roland, Ill., says: Celerina, as now prepared (Rio Chem. Co.) far excels any other formula as a nerve tonic and vital reconstructor that I ever used in my practice. It acted like a charm in two patients who came to me for treatment, one of whom was an old lady, fifty-five years old, suffering from dyspepsia of long standing. After the usual routine of remedies had been used to no effect, and having seen Celerina recommended by some of the medical journals, I concluded to give it a trial. After using the mixture one week she began to improve, and to-day is in better health than for twenty-two years. Second case—By using Celerina one month I dismissed a patient cured, suffering from nervous exhaustion. I would not be without it in my office.

Editorial.

Virginia State Board of Medical Examiners.

For the interest of subscribers outside as well as inside of Virginia, we present in this number a full report of the proceedings of the late session of the Board of Medical Examiners, with a copy of their By-Laws. Such a report will give information to many who are frequently writing to us on the subject, and will at the same time serve the purpose of suggestions to those in other States who are seeking to establish State Boards of Examiners.

An examination of the "tabular statement of the results of examination" held to date will give some interesting suggestions. In the first place, it establishes the fact that even some of the most time-honored diploma-granting colleges of the country have allowed their standards for graduation to fall too low; while it also shows that it is *not essential* that a doctor shall be a college graduate to be proficient. In the next place, it gives a most gratifying record as to the thoroughness of examination of graduates of some of the less pretentious institutions of the country; and, indeed, it leads to the suggestion of the advisability of students patronizing their home institutions until they receive their Doctor of Medicine degree before entering colleges of more ample opportunities for the purely clinical observations. It shows, further, that the Board rises to a plane of just equity in conferring its licenses—that neither questions of race, social conditions nor sectarian tenets are allowed to interfere with the decision of matters involving equal justice under the law. It is evident from all the rulings of the Board that it has a proper appreciation of the wants of the people and profession of the State. In our opinion, the system of the Virginia Board is superior to that of any other State Board, unless it be that of North Carolina, which is very similar in all essentials.

To answer many letters received at this office in one paragraph:—*No one* who did not possess a license prior to January 1st, 1885, to practice medicine and surgery in Virginia, can now undertake to enter practice in this State without having first stood a satisfactory examination before the State Board of Medical Examiners. This law applies as well to him who lives within a mile of the State boundary lines as to him who lives in New York or California. Railroad corporations, Springs companies, and the like, have no author-

ity whatever to import their doctors, except the doctors first possess themselves of the license of the Board of Examiners. Courtesy licenses are not granted; so that he who comes amongst us to practice for a season has to undergo the same ordeal as he who comes to stay. The common sentiment of the people and profession demand of the Board to see this law equitably executed. The constitutionality of the Virginia law has been thoroughly tested before the Court of Appeals of Virginia in the now important case of *Halsey vs. Virginia Board of Medical Examiners*, and has been sustained in every particular. Letters to the Board asking for courtesy permits are altogether useless, and if granted, would so dishonor the Board under the law as to be an open offense.

That some minor changes in the law might prove advantageous, we freely admit; but we would caution the friends of the Board against tampering with it except by *unanimous* approval. Our pages, however, are always open to parties to present their views—whether they differ from ours or not. Ours being a journal for the interchange of professional opinion and suggestion, we are not to be held responsible for the expressed opinions of our correspondents.

Bromine-Arsenic Spring Water.

It is seldom we allow ourselves to become enthusiasts over mineral waters newly sprung upon the market. But in the instance of the Bromine-Arsenic Spring water, such wonderful statements as to its remedial qualities have been made by parties capable of deliberate judgment, and such apparently wonderful results have come under our personal observation, that our commendation of it does not stand simply as an "editorial puff," but it becomes an editorial duty to call special attention to its beneficial therapeutic effects in a large and commonly-met-with class of cases in general practice. We are of opinion that the advertisement statements as to the therapeutic value of this water (pages 14 and 15 before reading matter) do not over-estimate its rightful claims to careful professional attention and prescription; while for certain forms of nervous dyspepsia due to too active mental preoccupation, etc., and as a tonic sedative in cases of insomnia and like forms of neurasthenia resulting from too great brain and general nervous activity and excitability, we scarcely think the advertisement is strongly enough worded to make that impression its merit justifies.

The fact of the late discovery of the medicinal values—tonic, alterative, sedative, etc.—of this water is easily ac-

counted for. The Spring is thirty or more miles from any present railway, and is more or less remote from any of the main lines of public travel. It is in a mountainous section of country, and, until 1885 (when a small hotel was established near by), it was perhaps a mile or so from even a mountain farm-house. The water does not gush out boldly from the hill-side, so as to attract the special attention of the passer-by, but rather oozes in trickling streams from the surface of the hill, and drains down a few feet, but in no distinct brook, into the streamlet a few yards off. Thus the water was not easily procurable until a basin was blasted in the rock in which, by suitable drains, to collect it; and even now the supply is so limited as not to satisfy the rapidly growing demand. Some two years ago, a farmer's son, who had some skin eruption on his hand or arm, incidentally while passing by, washed his sores with some of the water, and they rapidly healed. The fact attracted the attention of the farmer's family, who used the water with like good effect on some of their friends, and soon the curative qualities of this water became neighborhood talk. This attracted the attention of some scientists, who had an analysis made of the water, with the result recorded on advertising page 14. Now, that its properties are becoming more and more widely known to the professional men of North Carolina and Virginia, the water is being used by all who can secure supplies. And while much is known of its value, many of its virtues are yet to be studied with hopeful prospects of more valuable information.

Messrs. Faulkner & Craighill, of Lynchburg, Va,

This is a firm with which we have had nothing but pleasant relations "from our youth up." Whether as dealer or as patron, their prompt attention to orders, their fidelity in business relationships, and their reliability in every particular, impresses one favorably. Hence we are not surprised at their immense influence. It is *the* drug house of South-West Virginia, and carries a full line of goods needed by the doctor, and apothecary. As proprietors of "Camm's Emulsion," they have made for themselves a national reputation.

Our Next Engraving and Biographical Sketch

Will be of Dr. M. Josiah Roberts, of New York city, Professor of Orthopedic and Mechanical Therapeutics in the New York Post-Graduate Medical School and Hospital, etc., and will appear with our April number, 1887.

Accidental circumstances have prevented Dr. Edward Warren-Bey, of Paris, fulfilling his promise to us.

Practice.

The new \$1 monthly medical journal published in this city made its appearance in December in handsome dress, filled with valuable matter, and in editorial make-up showed a practiced hand and an able head. It will hereafter appear about the 15th of each month. A new department will be "Med-ical Methods, and opinions obtained by personal inquiry of the authors to whom they are ascribed." May its success equal the merits of its accomplished editor—Dr. J. F. Winn.

Physician Wanted.

Mr. H. M. Turner, Pernello, Franklin Co., Va., asks us to recommend a *good* physician, with sober habits, etc., who wishes a lucrative country practice. Pernello is twelve miles from Rocky Mount, is in the centre of a thickly populated country, and has no near physician.

St. Luke's Home.

The success of this institution is remarkable. Established and owned by Dr. McGuire, it is managed by a number of ladies, who, after paying the running expenses, devote any surplus received from the Board to the care of charity cases. These "guests" of the Home are not known as such to any other patient or employee, and are attended free of all charge. The charity of the ladies and generosity of Dr. McGuire is certainly great. Drs. H. McGuire, H. M. Taylor and Lewis Wheat are the attending surgeons, Drs. Edward McGuire and R. L. Bocock resident physicians.

St. Luke's Training School for Nurses.

St. Luke's has established a "Training School for Nurses," and have now eight ladies employed as nurses in the institution. When properly educated, physicians and surgeons in the South can obtain at any time a trained nurse from St. Luke's. This will supply a great need in the profession in the South.

Our Readers

Should send \$2 to Dr. W. E. Ryan, New Albany, Ind., for his excellent work, "*Aphorisms in Rectal Diseases.*" It is regular and strictly ethical, and is said to be far in advance of anything published on this specialty. The general practitioner cannot afford to be without it.

Rorick's System of Rectal Treatment.

The testimony in favor of this "system of rectal treatment," as advertised in this issue, is so convincing that we are persuaded that in it we have a system by which any practitioner able to purchase it (\$50), may successfully put his record alongside of those charlatans and so-called "specialists" in regard to rectal diseases, whose signs and flaring advertisements swing out in almost all our cities. The fee from many a single case of rectal disease treated successfully is enough to buy the instruments, etc. In examining the partial list of practitioners who have adopted this system, as given in the circular pamphlet, sent on application to Dr. Dr. Rorick, we find that twenty of the States are represented—in some instances, by prominent doctors.

Purcell, Ladd & Co.'s Syrup Hypophosphites Compound.

This "old reliable" house is always on the road to progress. It has just added to its long line of products a tonic of special value, in cases of nutritive defects, nervous debility, etc., in the form of the compound syrup above named. It is composed of the hypophosphites of potassium, calcium, iron, manganese, quinia and strychnia in definite proportions indicated in their circular to the profession. We cannot too highly commend to our readers the firm of Purcell, Ladd & Co., whose assurance of the careful selection and purity of chemicals and cautious preparation of them gives confidence in the product.

'Southern States' Digest of Practical Medicine.

In our advertising department this work is announced as in preparation. The advertisement is of special interest at present to our Southern readers, who are urged to become authors and subscribers. The plan is a novel one, but possesses several commendable features; and if the design undertaken is carried out, no author, lecturer or practitioner in this country can well afford to be without the work. The plan is somewhat similar to that adopted in Pepper's *System of Medicine*—each author writing on a special subject or class of subjects of his own selection. All of these articles are then to be systematically arranged, so as to form a complete work on *Practical Medicine*. Authors are especially exhorted to write *according to their convictions, based upon their experience and observation*; and not to make affirmations or denials simply because some eminent writer has made the

one or the other. Hence, the *Digest* will be, for the most part, an *original work*. The editorial staff of the *Digest* is not so much to criticize as to *assist authors* of contribution articles to put them in a proper shape for publication. Of course, however, each article has to meet with editorial acceptance or rejection. But our want of space does not even allow us to refer to other commendable features which are fully set forth in the circular letters of the General Agent, Dr. Henry V. Gray, of Roanoke, Va. The time in which to write the contribution articles has been extended to May 1, 1887, and from time to time until the work is completed. But we hope every one of our readers will *at once* write to Dr. Gray for full descriptive circulars, and indicate to him in what way they can further the general design. We trust that all will combine to make this work what it promises to be—a *standard authority of experience and observation*, as opposed to untenable or ever shifting theories. The enterprise has the endorsement of many eminent men. We shall keep our readers informed from time to time in regard to the progress of this enterprise.

The University of Virginia.

On the 20th of November, 1886, the building used by the Medical Department at the University, and known as the Anatomical Hall, was destroyed by fire. The origin of the fire is unknown. It originated in the third story of the building and in the bath-room of that story. The anatomical paintings, which were made some years ago by Mr. Henry Scharf, were destroyed. The anatomical models were preserved, and all of the paintings and instruments belonging to the chairs of physiology and surgery and obstetrics and practice were also saved. The anatomical paintings were extremely valuable as works of art, but were but little used for purposes of instruction, we are informed by the present Professor of Anatomy, Dr. Towles, who teaches almost entirely from the "subject."

There was no delay in the lectures in consequence of the fire. A temporary lecture-room has been erected for the Professor of Anatomy near the Dissecting Hall, and the other medical professors occupy rooms in the main building of the University.

The walls of the Anatomical Hall are perfectly sound, and the lower floor used as a lecture-room by Professors Cabell and Dabney is but little injured. A new roof will be put on

at once, and the Hall will be rebuilt in the Spring, and, we hear, will be made much more convenient than it formerly was.

During the present session, a Free Dispensary has been opened at the University, and classes for practical instruction in Medical Microscopy have also been formed. Rooms suitable both for the Dispensary and Microscopic work will be situated in the new building.

Under the energetic labors of the present Faculty, this old, tried and ever faithful institution is putting forth efforts that must result in such success as even to eclipse its past glories; and the pride which, for a half century or more the post graduate of the Academic Department has felt in naming the University as his alma mater, will soon be equally enjoyed by those whose degrees of doctor of medicine is obtained from the University of Virginia. In its proposed competition in the future with the so called practical colleges of the country, let its Medical Department receive the active support of the friends of the institution everywhere.

Obituary Record.

Dr. Charles A. Heflin

Died at Falmouth, Va., December 13, 1886, age 27 years. Dr. Heflin graduated with distinction at the College of Physicians and Surgeons, Baltimore, in 1882, and commenced practice at Richardsville, Culpeper county, where he remained for eighteen months. Wishing to extend his usefulness, he moved to Bealton, Fauquier county, Va., and soon succeeded in establishing a good practice, when he was taken with pulmonary hæmorrhage, the result of exposure. From that time his constitution was so shattered that he was unable to continue his practice, and went to Florida to regain his failing health. The change did not arrest the disease, and the end came slowly and painfully, while he was supported by Divine faith, which enabled him to exclaim, with Job, "Though He slay me, yet will I trust in Him." Dr. Heflin was a member of the Medical Society of Virginia, having been elected at the last meeting of the Society.

He was a young gentleman of unsullied character, and bid fair to become a distinguished physician if life had been spared.

H. M. D. M.

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Original Communications.

ART. I.—**Some Practical Points in Connection with Puerperal Eclampsia.*** By WM. C. DABNEY, M. D., Ex-President Medical Examining Board of Virginia; Professor of Obstetrics and Practice in the University of Virginia, etc.

In view of the number of articles which have appeared during recent years on puerperal eclampsia, it would seem unnecessary, if not positively unwise, to attempt to add to the literature of the subject. Nor have I anything *new* to bring to your notice; but there are several points connected with the pathology, diagnosis and treatment of the affection which I trust may not be without interest to you, and which are certainly worthy of mature consideration.

It is proper that we should have, in the first place, a clear understanding of *what is meant* by puerperal eclampsia. It is a convulsive disorder occurring during pregnancy, labor, or the puerperal period, accompanied by fever, and usually accompanied by albuminuria and diminution in the quantity of urine or solid matters dissolved therein. This definition

*This paper was prepared to be read before the Medical Society of Virginia during its session in Fredericksburg, Va., Oct. 26-28, 1886.

is, I am aware, open to objections, but it seems to me to be sufficiently exact.

The next point which presents itself is the *frequency* of eclampsia. There is a wide difference of opinion on this point. Charpentier tabulates 258,969 cases of labor, among which there were 731 cases of eclampsia. Lusk states that in the nine years from 1867 to 1875, inclusive, there were estimated to be in New York city 284,000 labors, and the number of deaths from eclampsia reported to the Board of Health in that time was 408—the total number of deaths from all causes in pregnant women during the same period being 3,342. Purdy states the figures to be 1 in 130.

With respect to the *most usual time of occurrence* of eclampsia, there is some difference of opinion; but all writers agree that it is far more commonly developed *during labor* than at any other time. The difference of opinion is as to the relative frequency *before* and *after* labor. It is rare before the seventh month of pregnancy, and rare, too, after the tenth day from delivery, though one case has been reported as long as twenty-nine days after child-birth (Charpentier).

The majority of cases occur in *primiparæ*. Charpentier states that of 683 cases, 522 were in *primiparæ*; and Madame Lachapelle's experience showed the proportion of 7 to 1. Twin pregnancies, or *extreme distension of the abdomen* from any cause, renders a woman more liable to convulsive attacks. A *long labor* and an *obstructed labor* have a similar effect.

And now we have to consider a most important point—the *nature of the changes in the character of the urinary secretion to eclampsia*.

In the vast majority of cases of eclampsia, albumen is present in the urine in greater or less amount, but this is not invariable. Charpentier has compiled from various authors 141 cases of eclampsia without albuminuria. Now, even supposing that a mistake was made in *some* of these cases, which is probable, the fact remains that a certain number of cases of eclampsia have been observed by competent men in which there was no albuminuria. In the list of names given by Charpentier are those of Brummerstadt, Hicks, Winckel,

Simpson, Tarnier, Trousseau, Elliot, and even Lever, and it is hardly conceivable that such men could have been mistaken.

The next question is as to the *other changes in the urine*.

The impression which has prevailed for years has been that the *urea* was diminished in amount, and that the convulsions were due to uræmic poisoning. This is perhaps the generally accepted view now. But in looking over a number of recent works on midwifery, I find that it has been abandoned by nearly every writer on the subject. The reasons may be briefly stated: The first is, that urea injected into the blood does not cause convulsions; the second is, that in cases of Bright's disease, when the amount of urea is greatly lessened, convulsions are not often seen.

But while the theory that the *urea* is the active poison in puerperal convulsions has been abandoned, another view, nearly akin to this, has been steadily gaining in favor. According to this theory, which is strictly in accordance with the facts, the convulsions are due, not to the diminution in the quantity of urea only, which is excreted, *but to the diminution in the amount of all the "solid urine,"* or those substances which are in solution in the urine. It is not necessary to name these substances here, but it is of the utmost importance to determine in every case of pregnancy the amount of this solid matter in the urine. Fortunately, this can readily be done.

Landois (*Human Physiology*, p. 428) states that the average quantity of water discharged in twenty-four hours by a healthy person is 1,500 grammes, and the amount of solids contained therein is 72 grammes, or about 1,000 grains of solid matter a day.

Now, there is a simple rule by which the amount of solid matter in the urine may be determined. The rule given by Landois being in the metric system, it may be better to give one which is equally reliable, and in more familiar language. It is as follows: Multiply the last two figures of the specific gravity of the urine by the number of *ounces* of urine discharged in twenty-four hours, and the result will be the amount of solid matter discharged, expressed in grains.

Fifty ounces, for example, is the ordinary quantity of urine passed per day, and 1,020 is the usual specific gravity. Now, multiply 50 by 20; we get 1,000 grains as the amount of solid matter.

The simplicity of this method should commend it to every one; and the chief object of this paper, gentlemen, is to try to induce physicians to *test the urine in every case of labor in order to use preventive measures* when eclampsia is to be apprehended.

We have already seen that while, in the vast majority of cases, albuminuria is a precursor of eclampsia; and while, of course, the presence of albumen in the urine of a pregnant woman should always cause anxiety and watchfulness, it should be mentioned that eclampsia *may* occur without albuminuria, and albuminuria often occurs without eclampsia. Surely it is not difficult to have the urine stand for twenty-four hours, its amount determined, and its specific gravity obtained; and when we reflect that on that examination may depend the life or death of a fellow-creature, the trouble will be as nothing.

This, then, is, as I have just said, the first point to which, with all deference, I wished to call the attention of my fellow-members of this Society; the importance of an examination of the urine in every case of pregnancy which should come under their professional care, and to give a ready method of making that examination. Messrs. Parke, Davis & Co., of Detroit, Mich., have prepared a most convenient little box for urinary analysis, with which many of you are doubtless familiar, and which I would recommend to those of you in want of such a test set.

I shall take up very little of your time in considering the *symptoms* of eclampsia. You are all doubtless perfectly familiar with them.

It is well, however, to bear in mind the *prodromic symptoms*, because they will suggest an examination of the urine which might be otherwise overlooked. They are headache, visual disturbances, epigastric pain, vomiting, difficulty in breathing, sleeplessness, and vertigo. Of these, the disturbances of vision, the epigastric pain, and the difficulty of breathing

show that danger is *imminent*. In connection with all of these nervous symptoms, and with the convulsive symptoms themselves, it should be mentioned that the nervous system of a pregnant woman is in a state of exaltation, if I might so term it; it is unnaturally excitable.

The *symptoms during the attack* are so familiar that I shall not recount them here, except with respect to the temperature changes, which are of diagnostic and prognostic importance.

And first with respect to the *value of the temperature changes* for the purposes of diagnosis. In eclampsia, the temperature rises *progressively* and rapidly, and may even continue to rise for a time after death.

Now, this progressive rise of temperature does not occur in hysteria unless it is complicated by some other trouble—such as slight septic intoxication, which is common *after* labor, but not before.

Then another singular fact with respect to the temperature in the uræmic poisoning (*true uræmia*) of Bright's disease should be mentioned here. It is this: In *uræmic poisoning*, properly so called, the temperature *falls* steadily from the beginning, and often sinks to a very low point before death. (Charpentier, p. 720.)

Now, how may the temperature changes be utilized with reference to prognosis? There is, as I have just said, a progressive rise in eclampsia, which in fatal cases continues for a short time after death. But if after this progressive rise, and perhaps a standstill for a time, the temperature falls, it is a favorable indication.

There are many points of great practical interest which are suggested by a study of eclampsia, but time will not permit us to refer to them now; and I shall only consider finally and briefly some of the methods of treatment which have been proposed, and the results which have been attained.

And it is especially of the importance of *preventive treatment* that I wish to call your attention. The first and most important part of this preventive treatment is to put the patient on an exclusively milk diet. All authorities agree upon the importance of this; and my friend, Dr. Clarkson,

of Haymarket, has recently emphasized it in his valuable paper, published in the *Virginia Medical Monthly* for the present month [October, 1886].

Charpentier, from whose encyclopædic work I have drawn many of the facts presented to you to-day, recommends bleeding—general blood-letting—as a preventive of eclampsia in those cases where an examination of the urine has shown the solid elements to be much reduced in quantity. Other members of the French school, especially Peter and Dessaul, recommend a similar measure. The quantity of blood should be small—from about eight to twelve ounces.

Dr. Purdy, in his excellent work on *Bright's Disease*, and kidney affections, recently published, strongly advises diuretics where the quantity of urine is diminished. Otherwise, the acetate and citrate of potassium, digitalis and convallaria majalis are especially useful.

Purgatives are universally commended, but both Charpentier and Lusk mention a danger from their use when the amount of solid ingredients of the urine is much diminished, and there is much œdema. These "solid" matters are then present in the subcutaneous fluid, and if, by violent purging and the consequent absorption of this fluid, the excrementitious matters are introduced into the blood in large quantities, convulsions may be precipitated. Nor is this simply a *theory*. Lusk states that he has actually seen this occur. The way to avoid it is to give the patient a large quantity of fluid to drink during the action of the purgatives. Hot-air bottles are *exceedingly* useful.

The remedies of service *during the convulsion*, and to prevent a repetition, are quite numerous, but only a few of them have any great value. I shall refer first to those whose usefulness is questionable, or at least limited.

The first is *pilocarpine*. It produces profuse sweating and salivation, and, given *prior* to the occurrence of convulsions or unconsciousness, it may undoubtedly prove of service. There is a practical difficulty about its action when the patient is unconscious; it causes profuse salivation, and the woman may be suffocated thereby.

Nitrite of amyl has been resorted to, and it is said to control

the convulsions; but the relaxation which it induces is liable to cause post-partum hæmorrhage. It should not be given, therefore, during, or especially after labor.

Oxygen gas, proposed by Lashkevitch, has been used in two cases by Farr with brilliant results. In city practice, where it is readily obtained, it may prove of value; but the danger in these cases is generally too imminent for it to be of *general* use.

Morphia is of extreme value. In two cases I have myself seen it stop the convulsions when chloroform and chloral and the bromides had been used without avail. Dr. Loomis has been a strong advocate for its use in these cases for years past.

With respect to *bleeding*, the widest difference of opinion exists. The statistics collected by Charpentier seem to show that a *small* bleeding lessens the danger in eclampsia, while a copious one increases it.

With respect to the value of *chloroform*, no difference of opinion scarcely exists, though as to its relative value when compared with general blood-letting, there is considerable diversity of view. The late Dr. George T. Elliot, of New York, wrote that if he was limited to the use of but one remedy in puerperal convulsions, that remedy would be chloroform.

Lastly, with respect to *chloral hydrate*, if there is any dependence whatever to be put in statistics (I know how they can be distorted), it is by far the best remedy as yet discovered for eclampsia when the convulsions are present or imminent. In 104 cases reported separately by Delannay, Testul, and Froger, there were 98 recoveries, 4 deaths, and two cases in which the result was unknown. In all of these cases, chloral alone had been employed. In 85 cases in which chloral was employed, along with bleeding and other means, there were 72 recoveries, 10 deaths from eclampsia, 2 deaths from complications, and one case in which the result was unknown.

Testul gives the following table of mortality under different methods of treatment:

Mortality when general blood-letting was used...	35	per cent.
“ “ purgatives were used..	56	“ “
“ “ purgatives and blood-letting combined were used.....	17.3	“ “
“ “ anæsthetics were used.....	17.8	“ “
“ “ chloral alone was used.....	4	“ “
“ “ chloral and bleeding combined were used.....	9	“ “
“ “ chloral and other measures were used.....	13.3	“ “

The last question which present itself, and which I shall refer to very briefly, is as to the *propriety of interfering with the regular course of the pregnancy or labor.*

With respect to inducing premature labor, there seems to be a very general opinion that it is inadvisable, except under very exceptional circumstances.

If, however, the labor has already commenced, and the os is dilated, or dilatable, delivery should be accomplished as speedily as possible with the forceps,, or by turning if necessary.

ART. II.—Sketch of the Emmenagogues and Ecbolics, with a Classification. By F. PEYRE PORCHER, M. D., Professor of Materia Medica and Therapeutics, and of Clinical Medicine, Medical College of South Carolina, Charleston, S. C.

The term (derived from *ἐμμηρία*, the *catamenia*, and *ἀγωγος*, *exciting*) refers to all agents which excite or promote the menstrual discharge; and this may be suppressed from various causes; the most opposite remedies may be employed to restore it.

Some writers, notably Cullen and Meigs, have been so hardy as even to deny the existence of any emmenagogue, because “the discharge from the uterus is not one of the excretions through which medicinal agents pass out of the system;” and Dr. C. D. Meigs refers in proof to Prof. N. Chapman’s very meagre list (*Woman and her Diseases*, p. 438). But medicines which excite the pelvic circulation and stimulate the organs in the neighborhood of the uterus undoubt-

edly have a tendency to excite or increase the menstrual discharge; and when Dr. Meigs, in his quaint and interesting work, recommends several very simple substances (aromatic sulphuric acid, or alum, five to twenty grains, and nutmeg, two grains, given every hour) for their power to reach the uterus, act upon its vessels, and *check* the excessive catamenial flow (in which opinion we fully accord), there are no greater theoretical or scientific difficulties in the one process than in the other.

Trousseau, on the other hand, asserts that all general excitants may be emmenagogue, since the uterine system does not escape the stimulation which these agents produce throughout the entire organic apparatus; and as amenorrhœa is connected with so many diverse causes, we find emmenagogues among all classes of agents in the *materia medica* and outside of it. Yet he esteems but three as worthy of a special description, inasmuch as they are, *par excellence*, emmenagogues, namely: *savin*, *rue*, and *saffron*.

The active principles of a number of plants and some chemical substances, entering the blood, penetrate to every portion of the system, and act also on the spinal cord and the sympathetic ganglia. They thus regulate the muscular bands surrounding the arterioles; and expanding or contracting them, they modify and control the circulation, the nutrition, and consequently the muscular energies, the excretion and the secretion of organs. The pelvic viscera and reproductive system in woman form no exception.

We will take special care, however, to show, by citing high and recent authorities who have studied the physiological action of drugs, that agents *do exist* which act specifically upon the utero-ovarian system, and incite and provoke the menstrual discharge. It will not be our province to give in detail the history, qualities, and actions of the special articles which are included under the caption to this paper; but we will endeavor to embrace in the general description of the subject whatever we think will best subserve the interest of the reader, and will refer to some of the conditions which necessitate the use of these agents.

We must also be allowed to include substances which,

though not strictly emmenagogues, are used by the physician to correct other derangements of the uterine functions, viz.: dysmenorrhœa, menorrhagia, leucorrhœa, uterine inertia, etc.; for if restricted rigidly to the consideration of "emmenagogues," the field will be a less fruitful one.

It is almost impossible to treat of emmenagogues without including a notice of the *ecbolics*. The latter we are not inclined to regard as a distinct class, but they differ only in the degree of power which they possess; they are simply emmenagogous intensified in their action, and cause such violent contraction of the pregnant uterus as to effect the expulsion of its contents, whether this be accomplished by their direct action upon the muscular structures, or through the intervention of the nervous media. This class, as Farquharson says, are used to stimulate the flagging powers of an exhausted uterus, and the principal ones he cites are "ergot, digitalis, savin, borax and quinine."

For the intelligent employment of these agents the practitioner must of course decide first whether the suppression be primary or secondary. Hence it is important for him to review and consider the condition of the reproductive organs, as well as the general state of the system, including, therefore: (1) the uterus; (2) the ovaries; (3) the natural, accidental, or pathological causes which may have produced the arrest of the function, viz., exposure to depressing emotions, to cold, to rheumatism, or gout, which are often prime factors in the production of menorrhagia, amenorrhœa, dysmenorrhœa, etc.; (4) the condition of the blood, whether it be anæmic simply, or be impaired by grave constitutional or malignant disease, such as tuberculosis, scrofulosis, phthisis, cancer, etc., which modify or arrest almost invariably the menstrual discharge; the later stages of phthisis are generally accompanied by complete suppression, which it is often difficult if not impossible to relieve; (5) derangements of the nervous and circulatory systems have to be carefully considered, as they lead to engorgement of the uterus and its appendages; (6) the parturient and puerperal conditions involve more or less remotely the use, the abuse, or the avoidance of these agents—as, for example, in the restoration, or the

arrest of the uterine secretions or excretions, should they be morbidly affected at these periods; (7) emmenagogues, or other agents endowed with the power to modify the uterine functions, are also employed in menorrhagia, dysmenorrhœa, leucorrhœa, uterine inertia, etc.; (8) lastly, they are used in the production or prevention of abortion.

Emmenagogues are divided into *direct* and *indirect*. The *direct* act merely by restoring the normal functions of the uterus when these are suspended; the *indirect*, by removing some constitutional condition which interferes with the due performance of the functions. Thus most of the ecboic drugs, as Farquharson states, act as emmenagogues when given in small doses to a non-pregnant patient, "as rue, castor, and especially ergot." So they may be both ecboic and emmenagogue; and this shows how inexpedient, if not impossible, it is for us to attempt to confine our attention to those agents which are literally and exclusively emmenagogue. We will therefore refer in this paper to—

1. Emmenagogues.
2. Abortifacients, or ecbolics.
3. Those agents which relieve by depleting, as in cases of suppression caused by plethora or congestion.
4. Those which check discharge by an astringent influence, or by contracting the capillaries.
5. To which may be added: The general salutary influence of pleasurable emotions, change of air, food, bathing (hot or cold), exercise, general or ferruginous tonics which restore the crasis of the blood—all of which are essential in maintaining the integrity and the proper physiological functions of the organs upon which a healthy state of the uterine system is intimately dependent.

We offer the following as a *classification of emmenagogues and other agents modifying the diseased condition of the uterus*, with brief references to authorities when deemed expedient, which will best include and exhibit all these agents:

1. MENTAL AND EMOTIONAL EXCITATIONS.—These often act as emmenagogues by their powerful influence in deranging the circulation, or in favorably modifying the physiological and pathological condition of organs. Fear and anxiety

stimulate powerfully the discharges from the bowels, kidneys and uterus, while they arrest the secretions from the salivary glands.

2. LOCAL EXCITANTS AND RELAXANTS.—Many agents which excite and increase the pelvic circulation provoke the menstrual functions:—hot douches, sitz hip baths, and pediluvia, poultices, or stupes, with or without mustard, or other local stimulating applications to the pelvic regions, especially if used at the time of the menstrual period. Patients sometimes find speedy relief by sitting in a vessel filled with hot ashes and water.

Leeches applied to the os uteri in a Recamier speculum, followed, after bleeding is checked, by hot stupes, often prove efficacious (Meigs). A tampon alone, or soaked in an astringent or styptic solution, will arrest the bleeding, if troublesome. *Hot water* thrown into the vagina, or rectal enemata of the same, also remedy inertia of the womb, hasten labor, and prove emmenagogue.

Cold, on the contrary, facilitates the dilatation of the arterioles by its sedative influence upon the spinal cord and the nerve-centres which preside over the blood vessels. So Dr. S. Ringer (*Handbook of Therap.*, 6th ed., p. 46) quotes the assertion of Dr. Chapman that “the peripheral circulation, and consequently bodily heat, is increased by ice applied along the spine,” and that “applied along the lower dorsal and lumbar vertebræ, by increasing the amount of blood supplied to the pelvic organs, promotes menstruation, and will even restore the suppressed monthly flux.”

3. EXCITO-MOTOR STIMULANTS—*Electricity*.—Amennorrhœa, when dependent on atony of the ovaries and uterus, is cured by static electricity, by faradism, or by the interrupted galvanic current. A shock from a Leyden jar may be transmitted through the pelvis, or a strong faradic or galvanic current may be applied by means of one pole on the spine, the other on the hypogastric region. In the case of married women, an insulated vaginal electrode may be introduced and placed in contact with the os uteri. This is a more effective way of making the application than by the

electrodes placed externally. (Bartholow, *Materia Medica*, p. 387, 5th Ed.)

Quinine. Its power to contract the uterus is much questioned and much discussed, though Farguharson quotes it without a mark of doubt! Many class it even among the ecbolics, as causing labor when incautiously used, and avoid its employment in pregnant women, even those suffering from malarial diseases. The question is still *sub lite*. Our own opinion is that it possesses no powers as an oxytocic, and Binz does not include this action while describing the properties of quinine.

Ergot. This powerful agent affects the spinal cord, reduces the blood-pressure, produces anæmia of the womb, and active contraction. Though used generally to contract the uterus in uterine inertia after the os is dilated, and to arrest hæmorrhage, it is also employed as an emmenagogue and in menorrhagia, for which it is extremely valuable.

The following formula prepared by Schieffelin & Co., we have found to act efficiently: *R.* Ergotin, Extr. hellebori nig., Pulv. aloes Soc., Ferri sulph. exsic., $\frac{aa}{aa}$ gr. j, ol. sabinæ $\frac{1}{4}$ min. Mix and make one pill. Dose, 1 to 3 pills.

Uva Ursi. Mr. Harris, of Virginia, states that it has a power over the uterus which resembles that of ergot. (Headland.)

4. AROMATIC, ODOROUS, AND EXCITANT PLANTS, AND THOSE CONTAINING IRRITANT OILS.—The following four are gastrointestinal irritants, their oils being absorbed; they are decidedly ecbolic and abortifacient, as they probably originate uterine contractions:

Savin. To show that one substance at least produces a distinct and powerful impression upon the womb, we quote the following succinct description from J. Mitchell Bruce, one of the most recent authors, who says of savin that its oil "acts as a remote local irritant to the kidneys and mucous membranes, especially those of the genital part, causing hyperæmia of the ovaries and uterus, and increases menstrual activity and contraction of the pregnant uterus. It has been used as an emmenagogue, but requires the exercise of great care. More frequently it is given as an ecbolic for criminal

purposes, and then often proves fatal as a gastro-intestinal irritant." Periera pronounces it to be "the most certain and powerful emmenagogue of the whole materia medica," and H. C. Wood used it successfully "in menorrhagia depending on relaxation of the uterine tissues." Binz says of it that "the pelvic organs are said to be severely irritated by it, and rendered hyperæmic. For this reason savin has been much recommended and used as an emmenagogue and abortifacient medicine."

Rue. Action similar to that of savin, but less active, and less employed as an emmenagogue. We translate from Trousseau and Pidoux (*Traité de Thérap. et de Mat Méd.*, t. ii., 533): The excitants which merit distinction under the title of emmenagogues, and which cannot be placed elsewhere, are rue, savin and saffron. They are, we think, decidedly abortifacient. The oil of rue is abortifacient, not so much because it produces inflammation of the gastro-duodenal mucous membrane, but because its active principle is absorbed. Many observers, the authors remark, confirm the abortifacient powers of the plant independently of any predisposition to abortion.

In two cases of young women, aged eighteen and nineteen, who had never menstruated, we used successfully the following: *R.* Sabinæ pulv., rutæ pulv., ergotæ pulv., \overline{aa} gr. xvij; aloes pulv., gr. xvj. Mix—make fifteen pills. Sig.: Take three the first day, six the second, and nine on the third day.

Saffron. The infusion and tincture of the stigmas were employed as emmenagogues in ammenorrhœa. The drug is now seldom used. Trousseau seemed to have no doubt regarding its powers, though it is difficult to keep and is expensive.

Cotton Root. The decoction is much used by the colored race and by the rural population in the Southern United States as an emmenagogue, and to provoke abortion. Dr. J. C. Martin, in a paper in the *American Journal of the Medical Sciences*, January, 1882, and referred to by Bid-
dle, says that it has no power on the motor and sensory nerves of frogs, rabbits and guinea-pigs, "and that it pos-

sesses no oxytotic properties." Maisch quotes it as "an emmenagogue and oxytotic" (*Organic Materia Medica*); see also our *Resources of the Southern Fields and Forests*, for details of local experience with the root.

Tansy. The oil "causes a vascular turgescence of the abdominal organs, increasing the secretion of urine and promoting the menstrual discharge." (*Nat. Dispensatory*, Stillé and Maisch). Very commonly used among the people to produce abortion and to restore menstruation.

Several of the vegetable substances which follow emit a camphoraceous smell, yield a volatile oil, and when given in hot infusion, exhibit moderate emmenagogue, combined with tonic and stimulating powers.

Serpentaria. This is more of a stimulating diaphoretic and tonic than an emmenagogue.

Penny Royal. One of the best adjuvants to other remedies during obstruction.

Sage. Used from the earliest periods to promote the menstrual discharge, being also a warm, stimulating diaphoretic.

Most of the aromatic plants are emmenagogue; the following are quoted by Maisch (*Organic Materia Medica*): Balm, catnip, horsemint, rosemary, garden thyme, wild thyme, millfoil, wintergreen, marjoram.

Chamomile. The infusion of the flowers is given in cases similar to those benefitted by castor and camphor (Trousseau).

Senega. An active excitant of the mucous membranes and secretions, and generally regarded as an emmenagogue.

Cimicifuga raises the blood pressure; has a remote stimulating action, "which increases the activity of the skin, kidneys, and generative organs." (Bruce). The decoction is emmenagogue (Farquharson, Maisch).

To show that some agents do influence the uterus most decidedly, we introduce the following:

Hydrastis. Fellner examined also the influence of *hydrastis* upon the uterus, and found that after each injection of the drug into the external jugular vein, the uterus appeared strongly injected simultaneously with the primary fall of the blood-pressure, and that during the subsequent

rise of the pressure the uterine muscle, and often also the round ligament, presented a powerful contraction, and were completely ischæmic. The contraction and ischæmia of the organ continue as long as the high pressure persists. The movements of the uterus were transferred to a kymographion and registered. After each injection of hydrastis the apparatus showed the contraction of both fundus and the horns. The maximal effect was obtained with the first rise and fall of arterial pressure, though contractions, especially in the horns, set in later.

Besides the fluid extract, Fellner examined also two alkaloïds of hydrastis and their salts, viz., *berberine* and the *phosphate of berberine*, and the *muriate of hydrastine*. These preparations produced likewise very energetic uterine contraction.

5. PURGATIVES.—Those are specially active which stimulate the lower portion of the intestines, on account of the diversion or afflux of blood which they cause, and the sympathetic irritation of the reproductive organs ensuing thereto. Warm, stimulating enemata add to their efficacy.

Aloes. From its action on the lower bowels, it is preferred to all other purgatives when the catamenia are delayed on account of anæmia and torpor; it may be combined with iron and bitters, and also with assafœtida.

Black Hellebore. Used from the earliest times in amenorrhœa; now seldom employed.

Guaiacum. In amenorrhœa and dysmenorrhœa dependent upon rheumatism and gout. Dewees' ammoniated tincture has been much employed in such cases.

6. STIMULATING DIURETICS.—*Cantharides*. This requires care in its administration, and will seldom or ever be required.

Parsely. Parsely, or its active principle, apiol, is used in neuralgia and dysmenorrhœa. "Employed as an emmenagogue in doses of four grains morning and evening." (*Jour. de Pharm.*, June, 1861). "The evidence is conclusive," says Bartholow, "that apiol has decided emmenagogue power." It is a stimulant to the uterine system, "and indicated when a state of torpor of the ovaries and uterus exists. The

amenorrhœa of anæmia and functional inactivity is the form of malady in which apiol is serviceable." (*Materia Medica*).

Pulsatilla is an irritant to the gastro-intestinal tract. A tincture made from the fresh leaves is much praised as a remedy in spasmodic amenorrhœa (Binz). It has also been recommended in functional amenorrhœa, when the menses are delayed or scanty, in suppressio mensium from fright or chill, and in functional amenorrhœa when the discharge is scanty (Biddle). Maisch does not include this among the plants possessed of emmenagogue power.

Water Pepper, Smart Weed (Polygonum Hydropiperoides Mx.). This indigenous plant increases the blood-supply to the pelvic viscera, and is applicable to cases of amenorrhœa due to functional inactivity or torpor of the uterine system. Ebberlé asserts that it is remarkable for its efficacy in relieving amenorrhœa, and he reports that "with no other remedy or mode of treatment has he been so successful as with this." Bartholow confirms the statement. Dr. T. L. Ogier, of Charleston, published his favorable experience of it in the *Southern Journal of Medicine and Pharmacy*, Charleston, 1846.

The tincture, fluid extract, and strong infusion are used. See our "*Resources of the Southern Fields and Forests*, p. 409, second edition, for a sketch of its use.

7. ROBORANTS AND TONICS.—*Iron* and its preparations are powerful and efficient by restoring a healthy condition to the blood, and through this, renewing the energies of the depraved nervous and secretory systems. Our plan is to administer such agents persistently in the intervals between the periods.

Arsenic. Menorrhagia, when produced by anæmia, is benefited by preparations of arsenic, especially when combined with iron; and arseniate of iron and ergotin can be given in combination (Bartholow).

Aurum. Amenorrhœa, dependent on torpor of the ovaries, may be removed by the persistent use of auric preparations. Chronic metritis, with scanty menstruation, is often remarkably benefited by them (Bartholow, *Materia Medica*, fifth edition, p. 259).

Food, bathing, change of air, travel, etc., also act by improving the nutritive functions, restoring the crasis of the blood and the integrity of the nervous system, thus constituting them indirect emmenagogues of decided value.

8. INCERTÆ SEDIS.—The following scarcely admit of classification; some are excito-motor; some cerebral excitants or cerebral sedatives; others act on the nervous system through the blood.

Mercurials “prove emmenagogue by their influence in exciting the secretions generally.”

Digitalis. An excito-motor. It contracts the arterioles, and, acting on unstriated muscular fibre, it has the property of stimulating the uterus to contraction; it thus checks flooding of menorrhagia; “and may also restore its normal functions when these are suspended, as in amenorrhœa.” (Farquharson).

Cannabis Indica. A cerebral excitant. It is frequently given as a special anodyne and antispasmodic in dysmenorrhœa, menorrhagia, and hysteria” (Bruce).

A writer in the *Charleston Medical Journal*, for 1857, found it to act rapidly on the uterus, not so slow as ergot, and promoting the expulsion of the child.

Aconite. Dr. West de Soultz is quoted by Trousseau as recommending aconite in cases of amenorrhœa dependent upon a spasmodic state of the uterus, or of a chronic engorgement of this organ (*Traité de Thérap. et de Mat Méd.*, vol. ii.). Ringer and Phillips both declare that drop-doses of the tincture, given every half-hour, will relieve sudden suppression of the catamenial flow caused by cold; and Bartholow asserts that it has a high degree of utility in congestive dysmenorrhœa occurring in plethoric subjects.

Carolina Jessamine (*Gelsemium*) is undoubtedly beneficial in cases similar to the above (Bartholow).

Blue Cohosh, *Squaw Root* (*Caulophyllum thalictroides* Mx). Said to facilitate parturition, and to be an active emmenagogue (Griffith's *Med. Botany; Resources South. Fields and Forests*).

Actæa Racemosa. It depresses the force and frequency of the pulse. It has been long employed in the country for a

reputed action upon the uterus similar to that of ergot ; also in suppression of the menses, especially when attended with pain, or rheumatic in character. "It is said to be useful in expelling the placenta, and in preventing after-pains. It has been recommended in amenorrhœa, dysmenorrhœa, and in menorrhagia. It has been given to prevent miscarriage in irritable uterus, and for the pleurodynia dependent on uterine derangements." Five minims of the tincture may be given every hour, or fifteen to thirty minims three times a day (S. Ringer : *Handbook of Therap.*).

Black Cohash (*Cimicifuga racemosa*). Dr. Suydam Knox read a paper before the Chicago Gynæcolog. Soc., 1885, and Dr. H. W. Jones, of Chicago, recommended it highly for its sedative and positive antispasmodic effect upon the parturient woman, lessening the pains of labor and greatly diminishing the duration ; it "relaxes uterine muscular fibre by controlling muscular irritability ; also increasing the energy and rhythm of the pains." Some observers denied its power ; but Dr. Jones was well-known for his advocacy of the drug "as an oxytocic." Dose, fifteen minims of the fluid extract in comp. syrup of sarsaparilla each night for four weeks before the expected confinement.

Permanganate of Potash. Sidney Ringer and William Murrel, of London, recommend this agent very highly in amenorrhœa, preferring the pill form to the pharmacopœial solution. They begin with a grain three times a day, then gradually increase the dose to two grains four times a day, giving the remedy only for the three or four days preceding the expected period, and continuing it, if necessary, even after the menses have appeared. They say that "the administration of one or two grains in pill, three or four times a day, for a few days, will bring on the flow almost to a certainty. In some instances the periods were brought on after the patient had ceased menstruating for over a year." It succeeds well with the plethoric and the anæmic, with young or old, and with those who, from catching cold or getting wet, have "missed" once or twice after having been regular. In the doses used it does not produce abortion.

Professor T. Gaillard Thomas is reported as declaring

that, "as an excitant of the menstrual flow, it is, I think, the best emmenagogue which has yet been discovered." (Address, New York State Medical Association, November 19, 1884).

Mr. P. Maury Deas (*British Med. Journal*, 1885) says that it is a useful and safe emmenagogue, free from the disadvantages which attend some other remedies of this class; that its use may be continued for months without any bad effects, and success need not be despaired of even after many months. "Even when it fails as an emmenagogue, it acts beneficially as a general and nervine tonic."

Dr. E. I. Doering (Chicago Gynæcol. Soc., 1885) also recommends it.

Our own experience with it in many cases in our own field, and in a large dispensary practice of my son, is favorable. We have the pills made with fuller's earth. It is sometimes given in capsules, taken midway between meals, followed by large draughts of pure mineral water. Pain sometimes follows its use.

Dr. A. H. Bampton (*British Med. Journal*, April 25, 1885) recommends unguentum resinæ as a convenient and suitable excipient—as kaolin is difficult to manipulate, and of a stony hardness when made up and dried. A writer in the *Therap. Gazette* for June 15, 1885, advises kaolin ointment as the best excipient. Dr. Deas "never found any symptom of gastric or intestinal irritation to follow its internal administration of three to six grains."

Dr. Fordyce Barker employs this agent in three classes of patients with excellent effect. First, young ladies between fourteen and nineteen who come from the country "to finish their education." Homesickness, entire change of their habits of life, overtaxing of their brain powers, etc., lead to an arrest of menstruation. Second, ladies both young and married who suffer severely from sea-sickness, and who have left port before their sickness comes on. In such amenorrhœa is almost sure to follow. Third, ladies between thirty to forty, generally married, who rapidly begin to gain flesh, whilst menstruation decreases both in duration and quantity. He does not prescribe it where the

amenorrhœa is due to grave constitutional disease, or for the relief of sudden suppression due to cold, moral shock, or an acute disease. "In this class I think the pulsatilla, opiates, and local agents, such as fomentations and large hot rectal enemata, are generally successful."

Salicylate of Soda. M. Bapette says that this agent may prove very useful in dysmenorrhœa, relieving the pain and facilitating the discharge. Given in doses of one drachm to one and a half drachm, it produced marked relief in three cases within an hour (*Therapeutic Gazette*).

Boric Acid. An action upon the uterine system and emmenagogue properties have been claimed for this agent.

Stillé and Maisch say, "the power attributed to borax of exciting and gravid uterus to contraction does not appear to us susceptible of well-grounded doubt; and while believing that it is efficacious in uterine hæmorrhage, we should find a demonstration of its value difficult" (*National Dispensatory*).

Oil of Amber. The *National Dispensatory* refers to the use of this agent in amenorrhœa.

In conclusion, we introduce *agents which are not emmenagogues, but which have a contrary effect* in restraining uterine discharges, and they are of sufficient practical value to interest us in this connection. Two of them relieve irritable conditions of the uterus, and the three last agree in being aromatic.

Black Haw (*Viburnum prunifolium*). Dr. Phares, of Mississippi, in 1866, introduced this indigenous plant as "a uterine sedative and antispasmodic, allaying irritability, relieving dysmenorrhœa, and preventing abortion, whether habitual or otherwise, whether threatened from accidental cause or criminal drugging."

Dr. E. W. Jenks, of Detroit, fully sustains these claims, and he adds: "I shall not overstate the fact if I say that no one remedy or means has proved of equal value in my hands, and I have tried faithfully all the common and time-honored methods of treatment." In cases in which the habit of abortion has been formed a teaspoonful of the fluid extract given three times a day, for several days before the

usual occurrence of menstruation, very frequently averts uterine contraction, and the pernicious habit is broken up."

In neuralgic dysmenorrhœa Dr. Jenks uses it in combination with *cannabis Indica*.

B. Extr. viburni prunifolii fluidi..... ʒ ij.

Extr. cannabis Indicæ fluidi..... ʒ ij.

Extr. conii fluidi..... ʒ iss.

Glycerinæ, q. s.....ad ʒ iv.

M. Sig.: A teaspoonful three times a day during the interval, and every three hours during menstruation.

We have formed a very favorable opinion of the value of this drug in several cases in which it has been used.

Potassium Bromide. A cerebral sedative. It contracts all the blood-vessels, producing anæmia of the brain and spinal cord, thus diminishing the excitability of these organs. (See experiments of Brown-Séquard, Meuriot, and Amory, quoted by S. Ringer, who says that it is of decided efficacy in removing the migraine caused by derangement of the womb, especially menorrhagia).

S. Ringer says that in some forms of menorrhagia it is equal, if not superior, to any remedy we possess; but it is more useful in the flooding of young, than of old women. Ten grains three times a day is a dose sufficient, but much larger doses are required in the more obstinate forms depending on organic changes in the womb. We have had excellent results from the following combination in cases of difficult and excessive menstruation:

R. Bromide of potassium..... ʒ iiss.

Fluid extr. of cannabis Indica..... ℥ lxxx.

Cinnamon water..... ʒ iv.

M. Sig.: A dessertspoonful twice or thrice a day in a little water.

Potassium bromide is simply invaluable in calming the restlessness, and producing sleep, in those suffering from almost any form of uterine disease. We have often used it combined with ammoniated tincture of valerian, or citrate of caffeine.

In Prof. Bartholow's experience, metrorrhagia produced by fibroids or fungous granulations, is much more decidedly

held in check by diluted sulphuric acid than by ergot; while menorrhagia dependent upon ovarian excitement is more quickly relieved by bromide of potassium.—*New England Medical Monthly*.

Cayenne Pepper. M. Cheron (in the *Revue Med. Chir. des Mal. des Femmes*) recommends this in all forms of uterine hemorrhage, whether due to fibroid tumors, to fungous endometritis, or even to epithelioma. Experiments and its good effects in hæmorrhoids led him to consider it as having a special action on organs very rich in blood-vessels. "It acts like ergot on the non-striated muscular fibres of the vessels—either directly or through the vaso-motor system—superior to ergot in being well supported by the stomach." Two grains in the pill form before each meal, increasing to four grains, may be given, or the watery extract, or the tincture much diluted (*Med. and Surgical Reporter*.)

Santonin in Amenorrhœa.—W. Whitehead, F. R. C. S., Eng., F. R. S., Edin., Surgeon to the Manchester Royal Infirmary, prescribed ten-grain doses of santonin to be taken for two consecutive nights, and to be followed each morning by a seidlitz powder. No worms made their appearance, but a few days afterward, menstruation, which had been in abeyance for several months, occurred. Santonin in amenorrhœa, and in many cases after the permanganate of potash has been tried in vain, and in chloro-anæmia, subordinate to amenorrhœa, appears to be of the most signal value. With the return of menstruation, or a discharge of blood from the vagina equivalent in effect, every symptom has rapidly subsided.—*London Lancet*.

Cinnamon. A writer has found the use of a decoction made of one-half ounce in a half-pint of water to check uterine hæmorrhage recurring at variable intervals from an old laceration. He states that Stillé and Farquharson both ascribe this power to it (*North Carolina Med. Journal*, 1885).

Cinnamon has long been used as a stomach corrective, and as a stimulating adjuvant to the administration of iron and digitalis in chlorosis, anæmia, and heart disease. It has also been occasionally employed in uterine hemorrhages;

but sufficient attention has not hitherto been paid to its properties in that direction. Drachm or two-drachm doses of the tincture produces a feeling of well-being and comfort in the stomach and an increase of force in the pulse, without acceleration of the movements of the heart. If this dose be much augmented, the agreeable warmth in the stomach is succeeded by an intense burning, with general nervous excitement, elevation of temperature, rapid pulse, diminution of urine, and sometimes profuse sweats. In the menorrhagia of chlorotic patients and the metrorrhagias of lymphatic and debilitated women, cinnamon will often prove curative, when other means have failed, especially in cases of long standing.

Nutmeg. We have already alluded to Professor C. D. Meigs' use of nutmeg and alum in restraining the menstrual flow, and we have repeatedly used it with good effect.

ART. III.—**Remarks upon Salivary Calculus, with Report of a Case.*** By B. M. WALKER, M. D., Danville, Va.

It is not a frequent occurrence in medicine that an opportunity is given to relate the experience of the physician as patient. As the case may prove of interest to some present, I will take pleasure in detailing its history.

On the 19th of June last, late on Saturday evening, I experienced a disagreeable sensation of the throat, which became worse during the night, and found me next morning scarcely able to swallow; the stiffness of the neck and difficulty of deglutition increased with the day, and about noon the submaxillary gland was much enlarged, hard and painful, the floor of the mouth swollen, and the flow of saliva very profuse. At night the pain was intolerable. I began with hot applications and liniment, and took a brisk saline cathartic.

I spent a restless night, and early next morning sent for my friend, Dr. Harvie, who came and slit up Wharton's duct, and this gave vent to a copious flow of saliva, but the pain continued. The doctor left, promising to return in two hours. Upon his arrival, at the expiration of that time,

*Read before the Medical Society of Virginia during the Seventeenth Annual Session, at Fredericksburg, Va., October 26-28, 1886.

the swelling had been appalling, the pain increasing in the same ratio. I could no longer swallow, and had to be propped up in bed to prevent strangulation from the enormous flow of saliva, which would frequently find its way into the trachea, and produce spasmodic closure of the glottis. The power to relieve that trouble was lost from the swelling of the base of the tongue, and the œdema of the larynx interfered with the action of the inferior laryngeal nerve, whose function is to govern the aperture of the larynx, and together with the superior laryngeal nerve when excited to move the expiratory muscles and cause them to exert violent ejection of all offending fluids and foreign substances. This was a conclusive evidence of the swelling of those parts. Suffocation now became imminent.

My other medical friends, Dr. Temple among them, hearing of my extreme suffering, came promptly to my assistance. Dr. Day found upon the cut surface what appeared to be false membrane. This led to a confusion of diagnosis, justifying the opinion with most of them that it was diphtheria. All the physicians agreed, however, as to the rapidly approaching demand for tracheotomy. My thirst was intense, and only relieved by a nasal tube carried deep into the œsophagus. Hot applications were continuously made, enveloping the entire neck. Lime vapor was kept constantly issuing near my mouth, and detergent washes were used freely, whilst assistants were employed regularly in extracting the tough secretions from the mouth. The tongue was swollen out of the mouth, and my face altered beyond recognition.

These symptoms lasted throughout Monday night. I had become very restless and partially oblivious of what was now going on. Early Tuesday morning Dr. George, in examining the mouth, found upon the floor of the mouth what he took to be a large piece of tough membrane. On inspecting it at the window, by pressing upon it, it bounced from under the pressure and was lost upon the terrace. He reported what had happened, but we were not prepared to believe such a train of symptoms could have followed from a small calculus. My condition was somewhat better.

The succeeding day I felt a hard substance at the distal extremity of Dr. Harvie's incision. Upon extracting it, I found it to be a second calculus. Then followed a discharge of viscid secretion which gave great relief. I was soon able to swallow, and the impending suffocation subsided. The whole trouble was due alone to the calculus—a part of

which I now have with me. The other, as stated, was unavoidably lost. That was much larger than the part I have, according to my friend, Dr. George's statement.

None of my medical attendants, seven in number, were prepared to meet such alarming and fulminant symptoms from salivary calculi, and among them were men of experience and talent, who were baffled in their diagnosis. Yet the course of treatment, though symptomatic, was purely scientific, doing all that could have been done at the stage of the disease as they encountered it. The lime vapor, in its timely aid to my respiration, doubtless saved the necessity of tracheotomy. And every step in the treatment was closely and faithfully watched. My bedside was never without a physician, day and night, for which I again express my sincere gratitude.

The literature upon this affection I have found very meagre, many surgeons giving only a trivial notice of the disease in their works upon surgery, and few, perhaps, ever witnessed a more alarming case from this cause. Yet this report justifies the possibility of its great dangers. An early recognition of the trouble with, free lancing and probing of the gland, would give great relief and prevent salivary fistula, which I have marvellously escaped. The treatment, happily, in my case was very successful.

I have been induced to give this report, from the infrequency of the affection, and to give it a more serious phase in the catalogue of diseases than authors seem disposed to assign it. The late Dr. Gross, in his valuable work upon Surgery, acknowledges the "perplexity of diagnosis," but fails to give much space to its recognition or treatment. So, also, other authors have neglected to report significantly the importance of aggravated cases. Though a kindred affection to ranula, still, in many particulars, it is quite different. In speaking with Prof. D. Hayes Agnew upon this subject, he advises free incision at the outset, and carrying the probe deep into the gland, maintaining a patulous orifice, making moderate pressure from the outside.

The analysis of the concretion proves it to be phosphate of lime, stained by the elements of salivary secretion, giving

to this specimen a light yellow color. Why this concretion, requiring years for its acquisition, (I felt trouble in this gland slightly twelve years ago and consulted the late Prof. J. Staige Davis, of the University of Virginia, about it—it soon subsided) should have become suddenly and so rapidly rebellious is a matter of conjecture and debate.

In conclusion, I will state that no diphtheritic trouble was developed, nor was there any systemic disturbance after the expulsion of the calculi. My health has been most excellent since my recovery.

The merit of this report is alone in directing the attention of those who have not met with cases similar in character to the one here given. There is no claim to any original therapeutic measure, nor new surgical treatment, but the object is to prepare the uninitiated for an emergency that may some day occur in the practice of some of you present.

ART. IV.—**The Constitutional Inebriate a Moral Imbecile.**
By T. L. WRIGHT, M. D., Bellefontaine, O.

In the *Virginia Medical Monthly* for December, 1886, appears a brief synopsis of some of the essential conditions which seem to me to characterize the state of drunkenness. There is an awkward typographical error in the third line of the second paragraph—for “impressible” sway of that impression, read *irresistible* sway, etc.

It is the common testimony of alienists and others who have taken the trouble to closely observe the facts, that the chronic inebriate is apt to show but little regard to truthfulness. On this point Dr. Clouston remarks, “No medical man who has been long in practice can doubt for a moment that there are persons whose cravings for these things (alcohol, haschish, opium and tobacco) are uncontrollable, and who have, therefore, a disease allied to all other psychoses.
* * * The neurine-stimulant craving is nearly always associated with impulses or weakness of control in other directions. All the faculties we call moral are gone—at all

events, for the time the craving is on. The patients lie; they are weak and fawning; they have no sense of self-respect or honor; they will steal; their affection for those formerly dearest is suspended; they have no resolution, and no rudiments of conscience in any direction."

It is claimed that, by reason of impaired sensibility brought about by alcohol, the perceptive faculty is greatly hindered; and that as a matter of necessity, consciousness is itself held in abeyance, or is very sensibly vitiated in many ways, and knowledge suffers accordingly.

For instance, as facts can be presented to the mind only through the intervention of consciousness, it follows that when consciousness is imperfect, the knowledge of present and passing events must partake of a like imperfection. And the inference appears to be incontestable, that conduct founded upon this inadequate conception of the reality of things, cannot be rightly invested with normal responsibility.

Another inference from the same premises appears to be just and proper, namely, that a necessarily imperfect conception of the nature and order of events, materially disqualifies a witness from giving testimony respecting such illy-perceived and falsely-reported facts and circumstances.

Perhaps the whole subject might be epitomized as follows:

1st. Complete consciousness is essential to the right or complete appreciation of present facts.

2d. The capacity to truly appreciate the character of present facts is an indispensable element in determining the measure of mental responsibility in respect to them.

3d. The extent of this capacity is also the reasonable measure by which the *credibility of witnesses* as to facts should be tested and determined.

But in regard to the low moral nature of the confirmed inebriate, might it not be due, in a great degree, to the *absence* of an habitual and strict application of the *conscious* mind to the things of passing life? Would not a loose and incompetent moral automatism naturally grow out of a habit of imperfectly applying the more acute tests of mind and morals to the common affairs of human existence? Is not self, the *ego*—is not personal identity—somewhat lost

and obscured by the haze and mist of imperfect consciousness, and the relations of the *ego* with the world exterior to it, so beclouded as to escape the powers and applications of the conscious mind? Suspension of function begets incapacity of function. Dr. Livingston, after years of absence amongst the black tribes of Africa, says that upon coming into the presence of his countrymen, he was at home in everything except his mother-tongue. "I seemed to know the language perfectly well, but the words I wanted would not come at my call."

ART. V.—**Biliary Concretions and Gallstones.*** By JACOB MICHAUX, M. D., President Richmond Academy of Medicine, etc., Richmond, Va.

The object of this paper is not to present a detailed and systematic treatise on the subject named in the title, but to notice the causation, symptoms, treatment, etc., with a report of three cases, in neither of which was there the usual symptoms of jaundice.

What is meant, then, in the first place, by biliary concretions? These concretions, of various sizes, shapes and consistency, but of uniform composition, have long received the name of inspissated bile; and most correctly, for the term is accurately descriptive of the condition. In other words, the bile has become, in these cases, too thick to flow out of its natural conduits, and is found blocking up their channels, as a dense viscid semi-solid or quite solid mass—indeed, showing all degrees of consistency, from complete fluidity to solidity. When solid, these concretions are very brittle, and give way easily between the thumb and finger. They are of irregular shapes (though rarely large), heterogeneous in structure, and of dark color; dark green or brownish red.

Now, a word as to the cause of this condition: It is due simply to the want of water in the bile. (*Harley.*)

*Read before the Richmond Medical and Surgical Society, January 12, 1887.

The *symptoms* of inspissated bile causing obstruction must vary according to size, number and locality of the offending masses. The attack is generally sudden, and lasts from a few hours to a week. There is usually severe pain much resembling that of ordinary intestinal colic. Jaundice is only induced by obstruction of the common duct, or of many of the smaller branches of the hepatic duct; it is never produced by obstruction of the cystic duct, for reasons sufficiently obvious, viz., that the gall-bladder is only a reservoir for the storage of surplus bile, and does not secrete anything but a small amount of mucus from its lining membrane.

These attacks often occur during the night. The pain is not always severe, but is generally located in the right hypochondrium. They are often paroxysmal, and of all degrees of intensity—usually subsiding suddenly.

The difficulty of dislodging masses of this character from the various ducts or the gall-bladder is often extreme; nay, it is often impossible, and death from inflammation of the organ or abscesses or absorption of pent-up and absorbed bile, must result.

Now, let us point out briefly a line of rational *treatment*. Remembering the pathology, it is naturally suggested that such drugs be used as tend to increase the fluidity of the bile. Happily, we possess a few, which have been shown to possess this power. Opiates with belladonna, administered sufficiently freely to produce the characteristic effects of both; warm applications locally, and a brisk saline cathartic will usually relieve the sufferer. The treatment after the subsidence of the acute symptoms is very simple—consisting of the administration of bicarbonate or sulphate of soda, which, being transformed in the system into taurocholate and glycocholate of soda, serve to preserve the bile in a normally fluid condition. The sulphate is preferably combined in one or two drachm doses, with a bitter infusion every morning, and the bicarbonate in twenty or thirty-grain doses, with taraxacum at bedtime, every night, at intervals, for a month or two. (*Harley.*)

We will now consider the subject of *gallstones*. The etiology of gallstones is still enveloped in mystery, and yet the

results of analysis of these singular bodies have thrown much light upon the subject, and afford such information that a rational line of treatment is laid down for their cure and prevention.

In the first place, it has been remarked by men of experience and long observation, that there is a decided tendency to heredity in this affection as well as that just treated of. They affect all ages and conditions of individuals, from the *fœtus in utero* to the octogenarian; though age and sex are predisposing causes—the female suffering much oftener than the male, and those beyond forty years of age being more subject to them than the younger. (These remarks are applicable to both inspissated bile and gallstone.)

Biliary calculi, considered physically, present a great variety of shapes and colors, though much uniformity in chemical composition. They occur in sizes, ranging the gamut, from mere microscopic globules to bodies weighing 300 or 400 grains. In color, they vary from pearly whiteness to black, with many intervening shades—reddish brown, bluish green, etc.

Their chemical composition, however, as stated above, is singularly constant. They are nearly pure cholesterin deposited in concentric laminæ about a crystalline cholesterin nucleus, a blood-clot or shrivelled entozöon. They contain a large amount of water, which has been estimated as reaching 50 per cent., and which rapidly evaporates upon exposure to the air. The laminæ tend to scale off during the evaporation of the water, unless means be used to prevent. Their specific gravity when fresh is greater than that of water, but upon drying, they generally float. (These facts are stated because the search for the stones in the vessels containing the accompanying *fæces*, may be much more thoroughly made, if they are borne in mind. The evacuations should be liquified by the addition of water, and passed through a seive.) In density, they vary as much as in shape or color. They have been found among the *fæces* as soft and yielding to the fingers as putty, and others again have been found hard and unyielding; in a majority of cases they are quite hard. When more than one are present in the

gall-bladder, they often present facets upon their surfaces ; these, however, afford but little clue to the determination of the number present. There are some cases reported where several thousands have been found *post mortem* in a single gall-bladder !

The symptoms most prominent are pain and jaundice. A calculus may exist in such situations, however, that there is not the slightest disturbance produced. One or more may exist in the gall-bladder without causing any symptoms whatever, or may lodge and become encysted in the intestine without harm, and remain there indefinitely. When they occlude the ducts and set up inflammation and cause retention of the bile, they present the obvious symptoms above named.

Associated with these symptoms are many others, such as rigors, fever, itching (intense, due to absorbed bile), flatulence, loss of appetite, vomiting, depression, etc. Pressure over the seat of pain ("about midway between the xiphoid cartilage and the navel") aggravates the suffering, whilst gentle rubbing *from right to left* soothes it.

When too large to pass into the intestine through the tubes, the calculi often ulcerate into the small intestine, the large intestine, the stomach, the pelvis of the kidney or urinary bladder, the peritoneal cavity, or out through an abscess pointing at the umbilicus, or elsewhere on the abdominal wall. During these movements, fatal hæmorrhage may occur, or exhaustion terminate life.

Sufficient has already been said in regard to the treatment of concretions of inspissated bile to enable the practitioner to forecast that the plan to be pursued here is similar.

A word, however, with respect to diet and preventive treatment, which will be applicable to both forms of trouble, and I shall have no more to say on this subject. The use of the carbonate of soda is of the utmost importance, as it changes in the system into glycocholate and taurocholate of soda, the natural solvent of cholesterin. The occurrence of these disorders in gouty and rheumatic diatheses makes the alkali doubly useful. Citrate of lithia, in from three to six-grain doses, thrice daily, is useful in these cases. Exclude

as far as practicable "fats and fat-forming foods." Starchy and saccharine foods are to be especially forbidden. Cholate of soda is thought to be one of the best salts for these disorders, as it has undergone already the changes desired, and, therefore, promises greater activity.

I append reports of three cases recently treated :

Case I. Mrs. D., aged about sixty, was seen December 8, 1886, and found suffering with violent pains in the abdomen which were relieved by opiates and purgatives. Three days later the pains returned with increased violence, and similar treatment, persevered in for three days, failed to move the bowels and give more than temporary relief. Stercoraceous vomiting began, and collapse was so extreme that surgical measures were out of the question. A large quantity (not less than two gallons) of water with eight ounces of castor oil was forced into the bowel, which, after some time, distended it sufficiently to let the stone (a cut of which shown



open and set in plaster is shown here) slip down. It did not pass out with the stool till thirty-six hours later. Improvement was then continuous though not very rapid. This stone must have ulcerated through the walls of the gall-bladder and small intestine as there could have been no *vis a tergo* to force it through the ducts. The shape and size correspond so exactly with those of the gall-bladder that it cannot be doubted that it was formed there and not in the ducts. The points shown in the cut are evidently the part projecting into the cystic duct. It measures two inches in its long,

and one in its short diameter; and weighed, when passed, 320 grains.

Case II. Miss Black; female, aged 11 years. No special bad health previously except some dyspepsia occasionally. She was seen on January 15, 1887, and found to have a tumor of the size of a lemon in the region of the gall-bladder which was very tender and gave "cramping" pains every few minutes. Hot poultices, opium and extract of belladonna ($\frac{1}{8}$ grain each) every fourth hour and small doses of bicarbonate of soda relieved the pain, and the tumor rapidly disappeared. Six or eight small stones were found in the motions a few hours (within thirty-six) later, and the patient is now up and doing well. These stones were "soft and steatomatous" in character.

Case III. A man thirty years of age who had frequent attacks of colic, but for the most part of his life had enjoyed unusually good health, came to me for treatment. On examination, I found an enlargement in the right side, which Dr. McGuire and myself determined to be, and diagnosed, distended gall-bladder. The patient's general condition improved under local applications of iodine and internal alkaline treatment. There was no jaundice present; nor were any gall stones found in the fæcal matter at any time. Though the patient's general condition improved, the enlargement still remains.

I must acknowledge great indebtedness, in preparing this article, to Mr. George Harley's excellent treatise on the liver.

Clinical Reports.

Prolonged Retention of Dead Fœtus in the Utero. By B. C. KEISTER, M. D., South Boston, Va.

I have just recently dismissed a very interesting case:

Mrs. S., of this county, a multipara (age 29 years), presented herself for treatment about five months ago. She stated to me that she had not had her menstrual period since the birth of her twins, which occurred two years ago. She suffered constantly from pain in all parts of her body, but especially in the lower region of her abdomen and small part of her back. She also stated that she had a constant discharge of "whites" (as she termed it), which was very of-

fensive to the smell. This lady is well connected, and gave a good family history. She has had two pregnancies, the last one being a twin pregnancy, as above stated. She stated that her family physician had treated her for neuralgia of the womb, and prescribed morphine for her to take when suffering from pain; and this was her only resort. Her husband informed me that she had been taking an average of five grains of morphine a day for the past eleven months. Her ghastly look and anæmic appearance only confirmed the statements of the husband.

After well considering the details of the case as related, I suggested a speculum examination of the womb, hoping thereby to clear up the case, and probably reach a diagnosis. The patient reluctantly consented. But when I examined the uterus, and found it so much enlarged, with a slightly dilated os, giving exit to an offensive discharge of a yellowish cast, and tenacious in character, I felt that I was still in the mist, so far as reaching a clear diagnosis was concerned. But acting on the suggestion of Dr. Paul F. Mondé, in doubtful cases, I introduced the uterine sound, which gave a measurement of five and a half inches from the external os to the fundus. In passing the sound well up, I could distinctly feel a seemingly hard mass of something, which I thought was adhered to the fundus. On withdrawing the sound, a yellowish discharge followed without any trace of blood. I procured a specimen of the discharge for further investigation, and directed the patient to secure a comfortable boarding place in the vicinity for one week. I examined the specimen under microscope, but found no cancerous germs. I decided that it must be a hydatid.

So on the morning of the second day after this examination at my office, I called at her boarding house, where I found her almost wild from the effects of the opiate. She stated that she had tried to do with a less amount of the morphine, but her pains had been so severe that she had to take a much larger dose than she had ever before taken. She had no other desire for the morphine than that of relief from pain, and in an appealing tone said that if I would only relieve her of her pain, she would never take another grain of morphine while she lived. I instructed her husband as to what I was about to do, and informed her that she would have to undergo another examination, to which she readily consented.

I placed her on an ordinary eating table, and at once I proceeded to introduce a large size sponge tent. I first

washed the vagina with a solution of permanganate of potash (gr. iv to ʒj) and after slightly dilating the os with Atlee's dilator and anointing the lips of the os with a ten-percent solution of carbolic acid and glycerine, I introduced a large size sponge tent. In the afternoon about 4 o'clock, I called to see the patient, and, on examination, found that the sponge tent had accomplished its purpose well. On removing it, a profuse discharge of pus and putrified blood followed. To say the least of the stench that followed the removal of the tent would only make "*matters*" unpleasant to think about. I administered 30 drops of normal liquid ergot (Parke, Davis & Co.), and in thirty minutes repeated the dose. In the course of a few minutes uterine contractions began, and half an hour later, regular labor pains came on. On examining the uterus with my hand, I felt a large mass of something protruding slightly through the internal os. Half an hour later revealed the whole secret. A putrified foetus was born, accompanied by a small placenta and a discharge of coagulated blood intermixed with pus and shreds of epidermis. The stench was almost unbearable, but like the martyr at his post, I bore it to the end.

Judging from the size of the cranium and other bones of the child's body, it must have lived at least five months in utero prior to the time putrefaction set in. I am not able to say how long the child remained in utero after putrefaction commenced. The patient states that her severest suffering commenced about eleven months previous to the time she presented herself to me for treatment. You will also bear in mind that this was the beginning of her morphine habit. She also states that the discharge from her womb commenced to be offensive about this time; all of which points to the conclusion that the child was retained in utero nearly the space of one whole year after its death.

On the day following the delivery I prescribed the following pill:

R. Quiniæ sulph.....ʒj.
 Ferri sulph..... ʒss.
 Pulv. aloes.....

Myrrh, pulv.....āā gr. xv.

Mix and make pills No. 30. Sig: One pill 3 times daily.

I also directed nourishing food and plenty of it, with milk punches made from the best apple brandy. I directed vaginal washes of Listerine and carbolic acid in proper proportions with warm water, to be used with a syringe twice daily. The patient's menses returned on the tenth day after

delivery. On the sixteenth day after delivery she returned to her home.

She wrote me several weeks ago that she was enjoying good health and having her menstrual periods regularly every month; and also stated that she had not taken any morphine since she saw me last July (which is over five months.)

The most striking features to be considered in this case are, first, the great length of time the patient went without menstruating and without expelling the dead foetus from the uterus; and, secondly, the great amount of morphine taken daily to relieve ordinary pains, and yet the patient did not become a confirmed morphine eater.

Case of Fibroid Tumor of Vagina in the Practice of Dr. Horatio R. Storer, of Newport, R. I. Reported by Dr. W. THORNTON PARKER, Newport, R. I.

At a meeting of the Rhode Island Medical Society, held in Providence March 18th, 1886, Dr. Horatio R. Storer, of Newport, exhibited a large fibroid vaginal tumor that he had removed a few days previously (March 13th) from a patient of Dr. J. P. Curley.

The subject, age 35, has been twice married—the first time at 17—the second time a year ago. She had one child at 18—labor being normal in every respect. She has never miscarried, and has had good health until four years ago, when she became very seriously menorrhagic—to such an extent as to produce profound anæmia, and endanger her life.

She first consulted Dr. Curley, some two or three months ago, who found the vagina entirely filled up by a mass of doubtful character, in shape resembling an enormous pear, save that the base was upwards. Though the previous history was entirely negative, as to predisposing or exciting cause, Dr. Curley feared, from the size of the mass, and from the fact that the uterus could not be felt above the pubes in the natural position, that the case might be one of the rare instances of spontaneous uterine inversion, and called in Dr. Storer.

Dr. Storer found the condition as above described; the depending portion of the tumor was soft, compressible, and comparatively friable, like true uterine tissue, and a female catheter would but partially enter the bladder—in these respects simulating inversion. But he also found in the lower abdomen, obliquely from below to the right, an obscure mass which moved with the tumor as this was grasped from beneath. Following this indication, he introduced into the abdominal mass in question—but with extreme difficulty, so completely was the vagina occluded—a sound to the distance of two and three-quarter inches, thus settling the diagnosis of a very large vaginal fibroid tumor, to which there was no pedicle whatever continuous with the cervix, anteriorly to the left. A couple of days afterwards, it was determined to operate, Drs. Curley and W. Thornton Parker being present and assisting.

The patient was anæsthetized, placed upon her back with the knees drawn up in the lithotomy position, and an ecraseur applied—the chain being held in position with the tips of the fingers of one hand introduced flatwise beside the tumor, while the screw was worked with the other hand, until a sufficient sulcus had been cut around the broad base to retain the chain from slipping. Shortly, however, so great was the resistance that the chain broke; and as it would have been impossible to reach the base of the tumor with any degree of exactness, by either bent scissors or knife, save after cutting and tearing into fragments the portion below, which might have been attended by fatal hæmorrhage, farther procedures were for the time suspended. Neither peritoneal symptoms nor sloughing of the partially sawn base of the tumor supervened; yet it was thought better that the patient should rest a few days before a renewal of the operation, though she was very anxious to have her fate finally decided. The catamenial period occurred, and, to the relief of all concerned, the amount of discharge was far less than it had been during the four years since the menorrhagia commenced. This was probably owing to the constriction to which the base of the mass had been subjected during the use of the ecraseur.

Finally, on March 13th, the same gentlemen being present as upon the former occasion, with the addition of Mr. Malcom Storer, student of medicine, the operation was again assayed by Dr. Storer, and successfully completed. There was virtually no hæmorrhage. When the chain of the ecraseur had cut itself away, and the tumor could be rotated in

the vagina like an orange, it was found that it could not be extracted in the usual manner. As the lower extremity was slightly compressible, it had been thought that the base would prove sufficiently so also, under strong, straight traction of the forceps, to permit removal, and therefore obstetric forceps had been left at home. Strong, straight, hooked forceps in the grasp of a strong man utterly failed to deliver the tumor. Dr. Storer then improvised a vectis by bending a large, stout iron spoon; but even this was ineffectual, though it neutralized the effect of the vacuum behind by permitting air to enter above the tumor; and he determined to do as he had done once or twice before in similar cases in former years, and produce expulsion by pressure superiorly, and from within, in imitation of the power of nature during the process of labor. Forcibly dilating the sphincter ani, he introduced his forearm into the rectum, the fingers having to enter the sigmoid flexure before he could exert sufficient expulsive leverage anteriorly. Under this added force, the vectis and forceps combined were now able to deliver the tumor precisely as though it were a foetal head. The vagina was then plugged. Several hours afterwards, upon drawing the urine, it was found that the catheter entered the normal distance, which previously had been impossible.

At the date of reporting the case—March 18th—it was progressing without a single unfavorable symptom.

In answer to an inquiry whether such apparent disrespect to the rectum was surgically justifiable, Dr. Stover replied that surgical justifiability was always to be decided by the results. The question was not so much what was advised by the text-books, and pursued by other operators, as what the occasion indicated—what the necessity required, and what the event proved. He had long taught and practiced that the rectum was just as tolerant of measures that would once have been thought heroic as was the peritoneal cavity. That Simon, of Heidelberg, had been criticised for invading the upper rectum, and some of his operations condemned, was no argument against intelligent entrance of the rectum under other circumstances. A healthy rectum could endure, without local or constitutional sequelæ, measures, or an amount of general dilatation that a cancerous, strictured or otherwise unhealthy rectum might not be able to sustain. These were points that must be left to the judgment and the skill of the operator.

He would say, however, that Recamier, and after him, Van Buren, of New York, by demonstrating the advantages of forcible anal dilatation, had opened up a wholly new field to the surgeon. It thus became at once a second vagina; the bivalve speculum of Sims could be employed instead of the always unsatisfactory tubes—whether, fenestrated or not—of former times; nitric acid, subsulphate of iron, and the actual cautery became easy of application. The rectum itself, and even the lower segment of the sigmoid flexure, could be tamponed as easily as the vagina, or the dilated cervix uteri. There was no longer a chance of concealed hæmorrhage upon excising internal hæmorrhoids. It had become actual malpractice to remove them now by the old and so often fatal ligature. While, as he had shown, in case of need very valuable assistance could be rendered from the rectum in assisting surgical procedures within the vagina—not as the accoucheur does, by exerting very slight pressure anteriorly, and reflexly exciting to greater muscular action by merely a finger within the anus—but by boldly inserting the arm nearly to the elbow. This was the counterpart of the method which he himself had long ago introduced into gynæcology, and that was now everywhere adopted by surgeons throughout the world—digital pressure and leverage backwards and forwards after its forcible dilatation by two or more fingers, or even the whole hand within the vagina. In the present case, there had remained perfect retention of the fæces, and already a good and normal dejection had occurred.

Dr. Storer stated that the interesting obliquity of the uterus to the right had been caused by the upward pressure to the left of the tumor, which could no longer descend, because of its extreme size; and that the more extended entrance of the catheter into the bladder after the operation was owing to the return of the parts to their normal position and relations.

The tumor, on removal, weighed a pound and a half. It was of the size, shape, and general appearance of an ox-heart. Its longitudinal circumference was fifteen inches, and its lateral circumference, at the point of attachment or

base, twelve inches. After ten days of contraction in alcohol, these dimensions were thirteen inches and ten.

Upon section, the tumor was found firm, homogenous, and fibroid. From the commencement, the vagina was washed out several times daily with carbolized water. The catamenia have again been present perfectly normal in every respect, as to the date of appearance, quantity, and quality.

The patient is now again engaged in her usual avocation—that of an energetic housewife and forewoman of an extensive laundry.

Original Translations

From the French. By R. M. SLAUGHTER, M. D., Theological Seminary, Va.

Value of M. Pasteur's Last Paper on Hydrophobia.

In a paper read before the Académie de Médecine, Nov. 2, M. Colin (d'Alford) says he could not accept the statistics of M. Pasteur. Doubtless, 2,400 persons, of whom 1,700 were French, were treated; doubtless, all had been bitten, but not by mad dogs. For example, a dog escapes from home, and without provocation throws himself upon passers-by. He is pursued and killed. This is no proof of his being mad. Another dog is teased in the streets, and bites. He is attacked and defends himself with ferocious air; his physiognomy confirming the lookers-on in the idea that he is certainly mad, he, too, is killed. If there is a veterinarian in the vicinity perhaps an autopsy is made, but it can give only presumptive evidence. If there is found some redness of the throat and some bits of straw in the stomach, as is often found in the case of dogs who have not the advantage to eat from a table, the inclination is to declare the dog mad.

In these very common cases there is no certainty. The only certainty is the animal's living, showing sickness and dying paralyzed some days after the first symptoms of rabies. It is, therefore, necessary to deduct from these 1,700—

1st. All those persons who were bitten by non-rabid animals. How many such were there? The statistics of the Minister of Agriculture give, from October 1st, 1885, to Octo-

ber 1st, 1886, 351 persons bitten (by rabid animals). The same statistics show that there were killed 1,697 dogs and 16 cats, or more biting animals than persons bitten. This suffices to show that a large number of the animals killed could not have been mad, or they would have bitten a much larger number of victims.

2d. There must be deducted also those bitten by really rabid animals, but who would not have, at any rate, contracted the disease. Happily, this number is large. The experiments of Regnault have shown that of ten dogs bitten in combat with rabid animals of their own species, one-half entirely escaped the disease, and man appears to be much less susceptible than the dog to the disease.

3d. Finally, there must be deducted the number of those treated by cauterization. This is a very efficacious treatment, even when done some hours after the bite has been received, for the saliva is a substance not easily diffusible, and especially when thick and viscid is it absorbed with difficulty.

It is pretty exactly known how many persons died with hydrophobia each year in France, before the introduction of M. Pasteur's mode of treatment. These were about 30. This number should be increased, if the number of rabid animals is increased, and it should be reduced, if, as is very probable, the cauterization treatment is better and more largely applied than formerly. Admitting that the number of those doomed to death in consequence of bites of rabid animals be on an average 30 a year, we find that 18 or 20 is the number of those who have been saved by inoculation.

The results of Pasteur's treatment are not what they seem to be at first sight. If these results seem to demonstrate its efficacy in a certain number of cases, they prove also that the treatment has failed very often. M. Pasteur has mentioned 10 or 12 cases among the French subjects and 34 foreigners can be counted. The method, as it has been applied, has not that certainty, that infallibility, which was claimed for it in the beginning.

It is to be regretted that the value of this method of treatment was not in the beginning fully tested on animals. A number of dogs might have been subjected to being bitten by a truly rabid dog, and divided into three lots. Of these lots, one might have been left alone, one treated by cauterization, and one by inoculation, and the results compared after several months. It could then be seen what proportion of those left alone contracted the disease, and what proportion of those treated escaped it.

In the cases of those who have died in spite of treatment, there may have been some who were not bitten by rabid animals, or some in whom cauterization had destroyed virulent matter and there is no certainty that the inoculations did not cause the disease. M. Colin is of the opinion that if these inoculations are really efficacious, they should also be dangerous.—*Le Practicien*, 15th Nov., 1886, and *Le Progrès Méd.*, 13th Nov., 1886.

Treatment of the Retention of the Placenta After Abortion.

P. Budin, Professor Agrégé in the Faculty of Medicine, Physician Accoucheur to Charity Hospital, Paris, in *Le Progrès Médical*, Nov. 27, 1886, says that in cases of abortion the two principal complications which may follow a retention of the after-birth are hæmorrhage and septicæmia. A large number of physicians consider that these complications are of frequent occurrence, and advise the removal of the after-birth, if it is not expelled in some hours. Some use the finger, some various kinds of forceps, and others the curette, either sharp or blunt. Dr. Paul F. Mundé, for example, uses the blunt curette, and cautions against the use of any force which would wound the woman.

But, it is not always easy to operate inside of a uterus, whose size is but little increased during the first months of pregnancy, and whose cervical canal is but slightly permeable. It is not easy to dilate the os with the finger or with mechanical dilators or tents. Some physicians, to operate more readily, even seize the cervix with a hook, and draw it down to the vulva. In a word, all these means, which vary according to the case and temperament of the operator, are used to extract the after-birth from the uterine cavity.

Is such treatment truly necessary or rational? To prove that it is, it seems to us necessary to show that retention of the placenta is really a source of frequent accidents, and that all digital and instrumental manœuvres are devoid of danger.

Is the retention of the placenta following abortion really a source of frequent accidents? We have collected the notes made of all cases in our service at the Charity from May, 1883, to May, 1886, and, besides, with the authority of M. Tarnier, we have collected notes of all the cases of abortion which occurred at the Maternité from July, 1883, to July, 1886. In this total of 210 cases (57 at the Charity and 153 at the Maternité), there were 46 cases of retained placenta. This gives a proportion of 22 to the 100.

What was the result in these cases of retained placenta? At the Charity there has been no case of hæmorrhage. At the Maternité in only two cases was there a slight hæmorrhage at the moment the placenta was expelled.

As regards septicæmia, in the 22 cases of retained placenta observed at the Charity, three of the women had fever when brought to the hospital. In the case of two of the three, the fœtus had already been expelled; in the third there was a temperature of 104°F. at the time of delivery, some hours after the admission of the mother. In all three the symptoms of septicæmia disappeared quickly under antiseptic treatment.

In the 24 cases that occurred at the Maternité, 21 recovered without accident; the remaining three presented the following peculiarities: One woman, having the placenta retained, had some symptoms of infection, which rapidly yielded to intra-uterine injections of Van Swieten's liquid; another, the victim of a criminal abortion, who entered the hospital with an elevated temperature, recovered promptly; the third, who, at the time of her admission, had bronchitis and fever, expelled the placenta entire after 60 hours. There was some fetid lochia in this case, which quickly disappeared after intra-uterine injections, but the fever and cough increased, and the existence of pneumonia became evident, which caused the death of the woman 14 days after the abortion.

It will then be seen that in 210 cases of abortion, there were 46 with retained placenta. Accidents following retention were very rare, and only one woman died, and it is doubtful if her death can be attributed to septicæmia. Then, when the women are placed in the favorable conditions of asepsia, retention of the placenta is not often, as has been pretended, a source of accident.

But, are all the before mentioned digital and instrumental methods of abstraction harmless? We must advise those whom this question interests to read carefully what has been published on the subject up to this time. It will be seen that the finger is generally insufficient to detach and remove the placenta. The forceps are difficult to manage in the interior of the uterus, and often leave parts of the after-birth. As for the curette, and more especially the sharp curette, many a reproach, well founded upon facts, has been cast upon it. The curette is not sufficient to detach debris when situated in the cornua uteri, says Dr. Mundé. Skjelderup and Doléris give testimony that, in spite of the most careful

scraping, portions of the placenta have been left. Moses reports a case in which the uterus was curetted, washed out, and cauterized with perchloride of iron, and from which, to their surprise, there was expelled the next day a fœtus without legs, six or seven centimeters long, which, in spite of the use of the sharp curette, had remained in the uterine cavity without causing any symptom. It is, moreover, dangerous, for by cutting healthy mucous membrane, doors are opened for infection. (J. Veit.) It causes hæmorrhages that are very difficult to arrest, and finally, when dilatation has to be resorted to, that in itself is not always harmless. Schwarz (of Halle) reports two cases of considerable laceration of the cervix, in one of which the tear extended up to the broad ligament.

Thanks to the use of the antiseptic method, the results have not been so bad as might have been expected; yet, it may be seen that even with these precautions against septicæmia and hæmorrhage, cases of great loss of blood are not rare. In one of the cases published by Moses, cauterizations with perchloride of iron failed to arrest the hæmorrhage, and the patient had a collapse, and it was necessary to tampon. All the women do not escape septicæmia, either. Moses reports endometritis in four cases, and Mundé, one case of pelvic cellulitis. Fehling has seen three cases of severe pelvic phlegmon; while Cosentino, Mundé and Fehling have seen death occur, despite treatment, or on account of the treatment.

Contrary, then, to the opinion of some writers, retention of the placenta following abortion is very rarely a starting point for complications, if recourse be had to antiseptics. On the other hand, the diverse methods of intervention, which have been advised and practiced, are either dangerous or useless. In consequence, we see no reason why we should interfere in such cases. We should confine ourselves to the use of antiseptic vaginal injections and dressings two or three times a day, and the after-birth will be spontaneously expelled.

But, should the complications of hæmorrhage or septicæmia occur, either because antiseptic precautions have not been taken, or on account of fruitless attempts made to remove the after-birth, which generally greatly favors the appearance of accidents, what is best to be done? Without entering into details, we will give in a few words the treatment.

For severe hæmorrhage, the tampon is the treatment par

excellence; it alone is the only truly efficacious one. The tampon should be antiseptic cotton-wool or charpie.

If there be any symptoms of *septicæmia*, vaginal antiseptic injections should be used every two hours or every hour. These are generally sufficient.

If, however, the symptoms are very grave, or if they do not readily yield to vaginal injections, then recourse must be had to antiseptic intra-uterine injections. Solutions of bichloride of mercury, 1 to 2,000 or 3,000, or of carbolic acid, 2 or 3 to 100 strength, should be used.

In the use of *intra-uterine washes* care must be taken that nothing prevents the free return of the liquid. This is perfectly assured by the use of a hollow sound in the shape of a horse-shoe. This treatment probably renders the uterine cavity aseptic, and is soon followed by the lochia ceasing to be fetid, and fall of the fever. A general treatment, too, must be insisted upon, especially the use of quinine.

This method of treatment, put in practice by Tarnier at the Maternité, and followed by ourselves at the Charity, has given the above related results. We think it would be difficult to obtain better.

Do not misunderstand me—it is not the pure and simple expectant plan we practice. The old method of expectation was good, but it has become in our day excellent—thanks to antiseptic injections. This method may be easily practiced by all physicians and midwives, and this is of no small advantage.

Hysterical Symptoms Transferred by the Use of a Magnet from One Patient to Another.

Dr. Babinski, Chief of the Clinic to Prof. Charcot, at the Salpêtrière Hospital, in a series of experiments has established (*Le Progrès Médical*, Nov. 20, 1886) that certain hysterical manifestations may be transferred from one patient to another, even when they are some distance apart, by the use of a magnet. By means of the magnet, different forms of hysterical paralyses, such as brachial and crucial monoplegia, hemiplegia, coxalgia and dumbness, from one patient to another. The patients are placed back to back, and while it is not necessary that they should touch each other, the transfer can be made more rapidly if they do.

The first series of many times repeated experiments were made upon two hystero-spileptics, each presenting the manifestations of (*sensitivo-sensorielle*) hemi-anæsthesia. These patients were placed back to back and touching each other,

and a magnet was placed against the side of one of them. It was then observed that one of the hemi-anæsthetics became in a few moments wholly anæsthetic, while the other recovered sensibility in her anæsthetic side—the opposite side also retaining sensibility. A new transfer is afterwards effected. Even if the magnet be removed, the totally anæsthetic patient recovered sensibility in her whole body, the other becoming in turn wholly anæsthetic. When separated, they both rapidly return to their original condition.

Cases of hysterical paralysis are next considered. A paralysis was generally transferred in its exact form to exactly the same part of the body. On one occasion, a brachial monoplegia became, in transferring, a double brachial monoplegia. Generally the paralysis is transferred to the side touched with the magnet, but this is not always the case.

In the same way hysterical coxalgia has been transferred.

Now comes an experiment which differs from the preceding, in that the persons experimented on were separated from each other. A hysterical mute had her dumbness transferred to another patient, from whom she was separated by the distance of some feet. These experiments were at first practiced upon patients in the state of hypnotic sleep. Afterwards, they were tried with the same results upon patients who were fully awake. Some were performed with one patient awake and the other asleep. Under the influence of the magnet the two states were interchanged—the first patient falling asleep; the second awakening.

We pass now to the second series of experiments, which were made upon patients, one a true hysteric, either male or female, and the other a subject of a real paralysis. These patients were rarely ever hypnotized, but were allowed to remain awake. The results in this series were very different from those of the first series. There was not, properly speaking, a transfer; for while the hysterical manifestations were transmitted, the symptoms of the general paralysis persisted.

Every precaution was taken in these experiments to prevent any simulation or dissimulation. It was found that, in some cases, repeating several times the experiments caused the paralysis to disappear, and from this may result a new method of treatment. The experiments will be continued.

Proceedings of Societies, Boards, etc.

RICHMOND MEDICAL AND SURGICAL SOCIETY.

[Reported by the Secretary, DR. C. L. CUDLIPP.]

January 11, 1887.—The president-elect, Dr. Hugh M. Taylor, assumed the chair.

Dr. Jacob Michaux read a paper on *Biliary Concretions and Gall-Stones* (which is published as Article V, in this issue).

Extraction of Whistle from *Æsophagus* with Wire Hook.

Dr. Jacob Michaux reported a case of extraction of a whistle from the *æsophagus* of a three-year old child. The object in reporting the case was to exhibit the instrument with which the extraction was performed. The instrument consisted of a band of slightly curved springy wire, about eight or ten inches long by one-quarter inch wide. At one end a smooth ring about an inch in circumference was so fastened as to represent a hook with an angle of about 20°. The instrument was passed down the *æsophagus* below the point at which the foreign body was lodged. The whistle was caught in the hook and by gentle traction withdrawn.

Two Cases of Intussusception Cured.

Dr. Hugh M. Taylor reported the case of a man who was brought to St. Luke's Home for treatment for intussusception. His abdomen was immensely distended and tympanitic; he had irritable bladder and stomach. Vomiting was not stercoraceous; still the vomited matter had a fecal odor. There was no circumscribed tumor or tenderness; there was not present the straining diarrhœa characteristic of invagination and no previous history of constipation. He gave three or four enemata during first twenty-four hours with slight improvement and continued this treatment at intervals of four hours with gradual but steady improvement to entire recovery. He thinks the trouble was twisting of the bowel.

He related another case in which he had been called to Orange county to operate for intussusception. A peculiar feature attending the case was that the fluids injected into the bowel did not return by that channel but were absorbed and excreted by the kidneys. Examination under chloroform revealed stricture of the bowel at about the highest point to which the finger could reach. Into this stricture a piece of hard fecal matter fitted, as a stopper to the mouth of a bottle, accounting for the failure of the fluids to return, after having been injected. The injection would force the plug back and away from the constriction—thereby making passage

into the bowel without difficulty, but any effort at expulsion would force the plug into the constriction, again completely obstructing all passage from the bowel. The stricture trouble was relieved by dilatation.

Bilious Dysentery (?) and Constipation.

Dr. Wm. B. Gray reported the case of Mrs. —, who was taken sick early in August last with what was supposed to be an attack of acute dysentery. After a few weeks the symptoms not abating, enteric ulceration was suspected at or near the sigmoid flexure. Specular examination of the rectum revealed nothing unnatural. Her tongue was natural, and there was no fever at any time. The patient thought she had passed the menopause, her age being between forty-five and fifty, and menstruation having ceased a year ago. Her stools became large, dark and mixed with dark and altered blood; there was pain on pressure over the liver, under the shoulder, and along the transverse colon. At each fecal evacuation the patient became very nervous and faint. Her skin and conjunctivæ were not discolored; tongue was normal in color. Soon constipation began to replace the diarrhœa. Her stools became tarry, alternating with coffee ground, bloody dejections. Her skin and conjunctivæ now became distinctly icterode; bile and albumin appeared in the urine. These symptoms disappeared under mild mercurial treatment with blisters over the liver. The blood now appeared in the stools at intervals of ten to twenty days—and was often entirely free from fecal admixture. This condition was checked by the use of salicylic acid. Often the stools were nearly normal.

The following facts have been revealed by microscopic examination of the dejections since reporting the case at the last meeting. The specimen is filled with multitudes of what is supposed to be ammonio-magnesium phosphate without the prismatic form as found in the urine. With a $\frac{1}{5}$ th object glass and a C eye piece, the largest crystal is $\frac{3}{8}$ ths inch wide and $1\frac{1}{4}$ th inch long. Sulphuric acid, five parts to one of water placed upon a drop of the material under the microscope breaks it up into beautiful drops of violet and purple hues. A drop placed on a porcelain plate with pure sulphuric acid strikes an ashy line bordered with carmine red, and the addition to these of British tincture of iodine greatly intensifies the colors. Ultimately the outer border turns black shading into a dirty green and red—Frey's and Harley's test for cholestrine: patient is to-day January 11, much better.

Analyses, Selections, etc.

New Operation for Fistula of the Hard Palate.

Dr. Clayton Parkhill, Demonstrator of Anatomy in the University of Denver, Visiting Surgeon to St. Louis Hospital of Denver, Colorado, etc., in the *Transactions of the Colorado State Medical Society*, 1886, published a "new method of muco-periosteal urano-plasty," adopted by him in the wards of the Philadelphia Hospital, May 29th, 1884, which is original with him, and is now presented for the first time. No opportunity has presented itself of doing the operation a second time. The patient was a woman, aged 35 years. The fistula was of syphilitic origin. On the fifth day after operating, there was apparently good union, and the sutures were removed. On the ninth day union was perfect, except a point the size of a pin-head. The following night, the woman evidently coughed or sneezed, and the whole wound was torn open. Unquestionably, the sutures were removed too soon, and had they been left in, there is every reason to believe that the result would have been perfect.

Fistula of the hard palate is a deformity which impairs speech, and food and drink pass through the opening into the nose. It may be congenital, traumatic, or carious. The ulcerative process may be either simple, or syphilitic.

The anatomy of the part may be briefly recalled. The horizontal plates of the superior maxillary and the palate-bones, uniting in the median line, form the bony roof of the mouth. Its soft covering consists of periosteum and mucous membrane, with an intervening layer of connective tissue. Between the superior maxillary bones and the palate bones exist the posterior palatine foramina. These transmit the descending palatine arteries, and the anterior palatine nerves. The vessel and nerve of each side respectively find further lodgment as they pass forward to supply the soft tissues in what is usually a groove, but sometimes a canal, situated at the line of junction of the hard palate and alveolus. Between the horizontal plates of the superior maxillæ, and just back of the incisor teeth, is located the anterior palatine foramen. This transmits the naso-palatine nerves, and permits of a free anastomosis between the sphenopalatine and the descending palatine arteries. Both vessels are branches of the internal maxillary artery. The anterior

and naso-palatine nerves are branches of the superior maxillary division of the fifth through Mæckel's ganglion.

Pancoast devised an operation for the cure of palatal fistula. After paring the edges of the opening, he made two wedge-shaped flaps, as shown in Fig. 1, their bases being toward the alveolus. These he inverted and brought together in the fistulous orifice. So difficult did he find it, however, to retain them in position, that he was obliged to introduce a soft catheter into the nose and tie over it. The objections to this operation are—first, the small connections of the flaps for blood and nerve supply, and second, the difficulty of retaining the flaps in position.

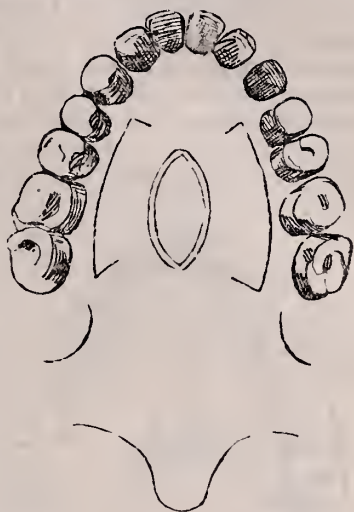


Fig. 1.

In an able paper in the October number, 1868, of the *American Journal of Medical Sciences*, Dr. Whitehead, of

Denver, Col., called attention to the operation of von Langenbeck. After the preliminary paring of the edges, he makes an incision on either side parallel with the alveolus, as shown in Fig. 2. With blunt instruments he loosens all the soft tissues from the bone, and brings them together by sutures in the median line. The objections to it are—first, the difficulty of the operation, and second, the unnatural position into which the tissues must be drawn, necessarily causing tension on the sutures.



Fig. 2.

Dr. Parkhill's method

may be described as follows:—Chloroform should be selected as an anæsthetic in preference to ether. The vomiting which so frequently follows the administration of the latter would almost certainly cause the sutures to cut out. Several firm pillows should be thrust under the patient's shoulders as he lies on a low table, thus tilting the head far backward. By this means, the blood will collect in the fauces and posterior nares, from which it can be emptied when necessary by turning the head. In this position the patient is neither obliged to swal-

low the blood, nor be strangled by it, while it is much more convenient for the operator than the sitting posture.

The mouth can best be kept open by means of a cork placed between the teeth, secured by a string, or possibly the mouth-gag of O'Dyer. The tongue must be drawn out by a strong suture, and held by assistant. The edges of the opening can be pared by a small scalpel or straight bistoury. The incisions for the flaps should be made as shown in Fig. 3, by a small round-bellied scalpel. Care should be taken to avoid, if



Fig. 3.

possible, wounding the trunks of the descending palatine arteries. The flap pointing forward should be elevated by a

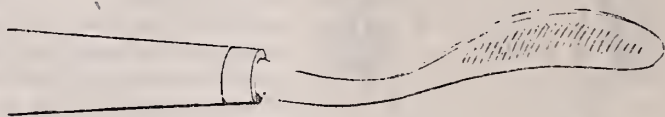


Fig. 4.

blunt-edged instrument, Fig. 4, similar in shape to the bone elevators found in all amputating cases. For separating the other flap an instrument having a round, blunt edge, the blade having an angle with its shaft similar to the common

hoe, as shown in Fig. 5, will be found most applicable. The greatest care must be exercised in elevating, not only the

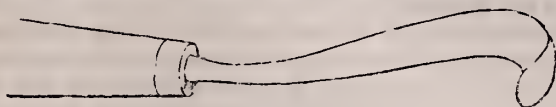


Fig. 5.

mucous and cellular tissues, but the periosteum, after the manner of Laugenbeck. This distinguished operator has shown, by his successes in cleft-plate operations, that periosteum, so transplanted, will form new bone. These flaps, covering the fistula, are expected not only to close it with soft tissue, but to fill it up by a new bony formation. It will be observed that the bases of the flaps have an abundant blood and nerve supply, while probably little hæmorrhage will result, owing to the tearing process employed in their separation. All the bleeding which occurs can be readily controlled by means of aqua pagliari, or Pariscoast's styptic. It will be found that the flaps will cover the opening completely, as seen in Fig 6, and without the slightest tension. The sutures should be of either very fine silver wire, or iron-dyed black silk. The latter will be found easier of introduction. A curved needle in any ordinary holder will answer the purpose, the patient being in the position recommended. This part of the operation requires the greatest delicacy and skill.

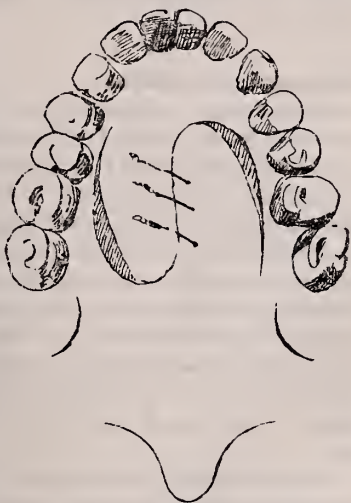


Fig. 6.

The opposite points of puncture should be in a slightly diagonal position, the inclination being towards the base of the flaps.

By this method, it will be observed, any swelling which takes place will not tighten the sutures. The flaps will swell forward from their respective bases, thus bringing the puncture points more nearly opposite, and avoiding tension.

No dressing is necessary. It is well, however, to stop the nostrils with bits of cotton, thus forcing the patient to breathe through his mouth.

The wound should be washed twice a day with some disinfectant solution. Its upper surface is efficiently reached by placing the tube of a fountain-syringe to the nostrils. Both secretory and excretory organs should be kept active; the food light, preferably fluid. Care must be taken that it does not come in contact with the wound. An excellent method of feeding the patient is by attaching a large soft-rubber catheter to a piston-syringe. This catheter may be thrust sufficiently far down the throat so that no regurgitation will take place. The sutures should be left *in situ* until firm union has taken place beyond peradventure.

The arguments in favor of this, as compared with the other methods, are—first, there is an abundant blood and nerve supply to the flaps; second, there is no tension, causing the sutures to cut out; and third, it is the easiest of performance.

Puerperal Eclampsia.

During the session of the Medical Society of Virginia, October 27th, 1886, Dr. Bedford Brown, of Alexandria, Va.,—now President of the Society—read a paper with the title, “Puerperal Eclampsia: A History of My Personal Experience during a Practice of Thirty-five Years,” which paper is published in full in the *Journal of the American Medical Association*, of November 13th, 1886.

He says that authors estimate the rate of mortality from puerperal convulsions at $33\frac{1}{3}$ per cent. Unlike most other convulsive diseases, this disease is not self-limited. Nature is unequal to the emergency when left unaided or trifled with. Life must succumb without prompt and sufficient aid.

The pathology is complex. Positive indications have been detected, showing that death may result from a variety of local lesions, and is not always the direct effect of uræmic poisoning. Active congestion, serous effusion and thrombosis of the brain, acute meningitis, œdema of the lungs, true asphyxia, are all the results of either puerperal nephritis or eclampsia. Dr. Brown studies the particular tendency to death, and uses means to avert that tendency.

The unbalanced state of the circulation, apart from the convulsions, is one of the most prominent features of the disease. During each convulsion, and a good portion of the

intervals, probably two-thirds of the entire amount of blood of the body accumulates in the venous system. The suspension of respiration during and after each paroxysm produces a stasis of blood of the whole venous system. Another conspicuous condition, arising from the combined influence of acute nephritis and the plethora of pregnancy, is an *increased arterial tension and blood pressure*. The impulse of the heart is increased in force, and often in area; and the cardiac sounds are higher in pitch. The pulse is frequently bounding, with a certain degree of fullness, firmness, and tension, reminding us of a genuine inflammatory type.

During the eclampsia, numerous superficial arterioles before imperceptible may be observed pulsating forcibly and rapidly. This increase of force is brought to bear upon the blood-vessels of the brain with irresistible power. Hence the brain appears to be the central point upon which morbid action and force are concentrated. Venous obstruction and pressure begin with suspension of the respiratory act. Obstruction in the pulmonary circulation throws the venous blood, charged with carbonic acid, back on the pulmonary artery, then on the right cavities of the heart, the venæ cavæ, the sinuses of the brain, the hepatic veins, the liver and its great portal circulation. We thus are to some extent enabled to realize the extent of this enormous venous pressure on the vital organs, and the injury sustained by the organism from the accumulation of carbonic acid during each act of convulsion. The danger from this increased arterial tension and venous obstruction is active and passive engorgement of the brain and lungs, apoplectic extravasations of blood, cerebral thrombosis, serous effusion within the cavities of the brain, actual meningitis, compression of the cerebral structures, and œdema of the lungs. These lesions constitute a not infrequent cause of puerperal coma. Œdema of the lungs is a frequent accompaniment. The great difficulty of respiration, the brief and hurried inspirations, the lividity of complexion, the copious secretion of mucus in the bronchial tubes and trachea, indicate the enormous obstruction and engorgement in the pulmonary circulation and the effusion of serum in the connective tissue of the lungs. Auscultation will usually reveal extensive subcrepitant râles. In a case of eclampsia with profound coma under his charge, extensive subcrepitant râles existed throughout both lungs.

Puerperal eclampsia may be accompanied with two opposite conditions of the blood—*plethora*, with its excess of red cor-

puscles, fibrin, and redundancy of blood-mass, or *extreme anæmia*, or *hydræmia*, with increase of white corpuscles, diminution of red globules, increase of serum and albumin. The former predisposes to active congestions of the brain; the latter tends to produce serous effusions in the brain and lungs. He has, time after time, seen the spasmodic and comatose symptoms relieved by timely bleeding, full catharsis, a few doses of veratrum, and the labor terminate by natural means, while the consciousness of the patient was restored, and yet the urine was loaded with albumin. Hydræmia is very frequent. While the complexion is always pallid in these cases, the extremities anasarcons, the patient debilitated, easily exhausted, and prone to difficulty and oppression of respiration, the temperature is often one or two degrees above normal. The pulse is quick and bounding, and the arterial tension decided. The condition is essentially one of febrile anæmia.

Pyrexia, in a considerable proportion of cases, is present—occasionally not more than half a degree, but not infrequently one or two degrees. On the contrary, an abnormally low temperature indicates a dangerous condition. Increase of temperature usually denotes active congestion, extravasation of blood in the brain, meningitis when the general condition is plethoric, and serous effusion in the brain or acute œdema of the lungs when hydræmia is present. In a case of acute œdema of the lungs in eclampsia, the temperature rose 10°.

Treatment.—In the beginning it is important to decide whether we should not place the patient under anæsthetics, dilate the os uteri by mechanical means, and deliver with instruments; or by appropriate treatment subdue arterial tension, relieve blood pressure and congestion, eliminate from the system the ammoniated poisonous materials in the form of urea, and control reflex excitability and spasmodic tendency, and then permit nature to finish the work. He has on many occasions pursued the latter course with the best results.

The three most important principles to be carried out are, prompt reduction of arterial pressure or tension, elimination of effete matter from the system, and the absolute sedation of the reflex functions of the spinal cord. We cannot in safety depend upon any single remedy.

General depletion is a remedy which cannot be dispensed with. All of his cases in which depletion was resorted to early, freely, and judiciously, recovered with a single exception. In this case, after moderate depletion, anæsthetics were used

too freely, to the exclusion of other remedies. One of the earliest and most manifest effects of depletion is unloading the engorged venous system, the lungs, the right cavities of the heart, and the cerebral circulation. In cases of profound coma, with stertorous breathing, frequent and bounding pulse, increased temperature, with repeated paroxysms of spasms, there is absolute safety in the lancet judiciously and timely applied. The state of pregnancy, above all other conditions, is the most tolerant of depletion. The measure must not only be resorted to early to avert danger to the cerebral structures, but copiously, to break down permanently arterial pressure. From sixteen to twenty-four ounces will probably suffice to cause a decided amelioration. As a usual result, the action of the heart will be slowed, the pulse will become soft, the impulse of the organ will be diminished, temperature will decline, coma will be partially relieved, consciousness will return temporarily, and cyanosis will diminish. But depletion cannot accomplish everything.

Mercury.—In puerperal eclampsia and nephritis I esteem mercury a valuable agent as a cathartic and alterative. This opinion is based upon *experience*. As an evacuant and stimulant to the entire system of emunctories and secretory organs, it has no equal. It stimulates, and gives impetus to the secretory functions of the kidneys, liver, and intestines. It exerts a remarkable alterative action on the constituents and organism of the blood, often arresting the disorganizing influence of disease. The first case of puerperal eclampsia which came under his care, in 1851, was treated by depletion, mercury, and ergot; it was an exceedingly violent one, but recovered. Calomel was given in scruple doses every three hours, until it acted as a cathartic most copiously. It also acted as a diuretic. After the birth of the child, the patient remained comatose for twenty-four hours. Notwithstanding the patient had been effectually salivated, her restoration in every particular was speedy and uninterrupted. At a subsequent period, when it became fashionable to condemn the use of mercury in acute nephritis, he abandoned its use for a time in puerperal eclampsia, but with a decline in his former success. He has again returned to its use in puerperal eclampsia, with equally good effects. Calomel should be administered in scruple doses every three hours, until its cathartic and diuretic action is procured. In acute nephritis, whether from cold, scarlatinous poison, or puerperal causes, he has repeatedly witnessed the action of mercury on the functions of the kidneys, arousing them from a state of inactivity when other remedies have failed.

Cathartics.—For the relief of effusion in the brain, œdema of the lungs, venous engorgement, and uræmic coma, copious purgation is one of the most effectual remedies; there is no class of patients which tolerate catharsis better than eclamptic females. In all of his cases which recovered, cathartics were used boldly and fearlessly; in all the fatal cases they were either not used at all or sparingly. They not only eliminate urea and other effete matters, but remove that redundancy of serum and albumin with which the system is charged, thereby diminishing blood pressure and the tendency to congestion and serous effusion. His practice is to give 15 or 20-grain doses of calomel, repeated in two or three hours, followed by drop-doses of croton oil in mucilage every hour until copious catharsis is obtained. Subsequently, if the desired relief to congestion and coma is not secured, the dose of mercury is repeated every three hours, until further action on the abdominal organs is obtained. At this stage, the cathartic and wonderful alterative influence of the remedy on the entire system, in giving relief to the morbid processes, may be calculated on with almost a certainty. In some cases he has given calomel in combination with gamboge with good effect, where there existed great torpidity of the intestinal canal and kidneys.

Anæsthetics.—It is safe to act upon the rule that these agents should not be used for the purpose of maintaining a prolonged state of unconsciousness, but to control inordinate reflex action. We do not wish to produce coma, but merely a suspension of spasmodic action until the morbid causes are removed by depletion, cathartics, and delivery. In eclampsia, the tendency is always towards coma. Hence, all things should be avoided which tend in that direction. Nevertheless, anæsthetics are of infinite value in convulsions. They act best when used just in the beginning of each convulsive seizure in sufficient quantity to abort the paroxysm. If given much during the intervals, they increase the tendency to coma, and pushed to the extent of increasing this tendency; the effect becomes dangerous. It is desirable for the mental faculties to emerge from each paroxysm lucid and clear.

Chloroform in moderate quantities modifies reflex action and controls spasm; but in larger quantities, frequently given, it destroys all consciousness and impairs the recuperative energies of the brain, endangering the respiratory and vaso-motor centres. It does not eliminate the poison, urea—the prime cause of the trouble—from the system; neither

does it reduce arterial tension, blood pressure, and the tendency to congestion and œdema. He has seen eclampsia patients die from coma under chloroform, with symptoms of congestion and blood poisoning.

As a sedative, *chloral* is valuable when given in drachm-doses *per rectum*. It is a more efficient anti-reflex agent than chloroform when combined with the bromides. It does not depress the respiratory and vaso-motor centres as chloroform, and is very efficient in controlling reflex action, and gives time for the operation of more permanent remedies.

For some years past, it has been his method to give moderate quantities of chloroform in the beginning of and during the paroxysm, and then permit the patient to rest. This proceeding will usually abort or modify greatly the attack.

In seeking for a sedative agent of great anti-reflex powers, without action either over the powers of consciousness or sensibility, probably *veratrum viride* stands foremost. With chloroform, choral, and the bromides, and veratrum, we can so manipulate these agents as to suspend reflex action without the induction of coma, or arresting the respiratory function. The veratrum regulates the unbalanced circulation, and relieves engorgement and active congestion. The tincture of veratrum is given with greater advantage hypodermically in 10-drop doses every two or three hours, until the object is accomplished.

Ergot.—In his first six cases of eclampsia, after complete relaxation of the os uteri and perineum by depletion and cathartics, and the foetal head had descended, ergot in infusion was given in large doses *per rectum* to complete the labor. In all of these cases the results were favorable. He observed then the favorable action of ergot as a sedative on the reflex powers, and as an agent to lessen hyperæmia—a therapeutic property of ergot, then unknown, but now well established. While the pains of labor grew much more forcible and frequent, the congestive symptoms of the cerebral circulation diminished, and the patient became more conscious.

Instrumental Delivery.—When no treatment seems capable of relaxing the os uteri, while the head remains above the brim of the pelvis, and the pains are totally inefficient, while eclampsia symptoms are not modified or relieved, speedy delivery becomes our only resource. The only question under these circumstances to decide is the safest and best method. Molesworth's dilator and the forceps or the vectis may be required. When "turning" can be substituted, so much the better.

He makes a passing allusion to a condition that occurs not unfrequently in the progress of bad cases. It is characterized by great prostration, excessive frequency and fullness of the pulse, cold extremities, and pallid complexion, and either great restlessness or stupor. No remedy acts so favorably in re-establishing reaction of the depressed circulatory nervous powers as tincture of belladonna in 10-drop doses, given either with one eighth grain of morphia to correct restlessness, or without it when contra-indicated, every two or three hours.

With the design of illustrating more clearly the foregoing views relative to the pathology and therapeutics of eclampsia, he cites briefly the history of certain cases in his practice.

Hyoscin Hydrobromate for Insomnia of Mania, Delirium Tremens, etc.

Dr. J. A. Hagemann, of the Pittsburg City Farm and Insane Asylum, in a note contributed to the January number, 1887, of the *Pittsburg Medical Review* (which, by the way, is a new \$1 monthly journal, well edited and nicely issued, and deserves success), states that the reported efficacy of hyoscin in the treatment of maniacal cases led him recently to try it, with very great satisfaction, in two cases of delirium tremens, where there were persistent insomnia, high mental excitement and muscular activity. Chloral and opiates had been given with but indifferent results. In one case he gave one seventy-fifth ($\frac{1}{75}$ th) of a grain of hyoscin hydrobromate, hypodermatically, producing natural and refreshing sleep, from which the patient awoke, as he expressed it, "nearly ready for another spree." In a second case of insomnia from delirium tremens, he gave one one-hundredth ($\frac{1}{100}$ th) of a grain hypodermatically, but found that insufficient. After waiting two hours he gave hypodermatically one-sixtieth ($\frac{1}{60}$ th) of a grain. The result was as in the first case. The patient awoke from a refreshing sleep most decidedly improved in his condition. He uses the following formula:

R^x Hyoscin hydrobromate (Merck)..... gr. j.

Alcohol ʒj.

Distilled water, q. s. ad..... ʒx.

Mix—Make solution.

One minim contains one six-hundredth ($\frac{1}{600}$ th) of a grain of the drug, and any desired dose can be easily computed. The hypodermatic dose is from one one-hundred and twentieth ($\frac{1}{120}$ th) grain to one-sixtieth ($\frac{1}{60}$ th) grain, though somewhat large doses have been given.

Cotton Root as a Uterine Hæmostatic.

In a paper read by Dr. Henry Garrigues before the Medical and Surgical Society of German Physicians of New York, published in the *New Yorker Medizinische Presse*, he stated his experience with the cotton root (*gossypium herbaceum*), of which he has made very extensive trials in all forms of uterine hemorrhage during the last two years, and which has certainly proved remarkably successful. He treated 139 patients afflicted with different forms of uterine diseases, in whom hemorrhage had been a very prominent symptom, with this drug, with the following results:

Anteflexion.....	33	Relieved.	2	Not relieved.
Anteversio.....	1	"	...	"
Retroflexion.....	8	"	...	"
Retroversion.....	1	"	2	"
Prolapse of uterus.....	1	"	...	"
Endometritis hyperplastica.	3	"	1	"
Pelvic inflammation (perimetritis, pelvi-peritonitis, parametritis, oophoritis, salpingitis).....	5	"	...	"
Subinvolution.....	2	"	...	"
Laceration of cervix.....	15	"	2	"
Mucous polypus.....	1	"	...	"
Fibroid.....	7	"	2	"
Sarcoma.....	1	"	...	"
Carcinoma	2	"	...	"
Following labor and abortion.....	6	"	...	"
Sanguineous leucorrhœa after menopause.....	1	"	...	"
Menorrhagia and Metrorrhagia, unknown causes.....	38	"	5	"
	<hr/>		<hr/>	
	125		14	

If the same patient presented different affections at the same time, *e. g.*, laceration of the cervix, cellulitis and flexion, she was only mentioned once, and that under the diagnosis which is the most frequent cause of hemorrhage, *e. g.*, in the case cited, under flexion.

When there were indications for other methods of treatment, these were fulfilled, *e. g.*, the polypus was removed; in case of ectropion of the cervical mucous membrane, injections with liq. ferri sesquichlor. (5ss to one pint of water)

were ordered; in hyperplastic endometritis the curette was employed; malpositions were corrected and a pessary introduced; pelvic inflammations were treated with hot douches and glycerine tampons, and syphilis by specific medication.

Though this combined treatment was employed, he feels justified in drawing the same conclusions in regard to this root as a hæmostatic as he formerly did when using in its place fluid extract of ergot, fluid extract of viscum album, tincture of cannabis Indica, tincture of capsicum and bromide of potash. Since he commenced to use the cotton root, he has always prescribed it first, and if it failed he had recourse to the old remedies. When he could not detect any particular cause for the hemorrhage, he used cotton root alone.

In the beginning he prescribed the fluid extract, but found it of very little benefit if not taken in very large doses, which were not tolerated well by the patients. These cases, however, were omitted in the above table, which has only reference to those treated by the drug in the form of a decoction. He directs to boil three large teaspoonfuls in a pint of water for fifteen minutes, then to strain it and to drink it cold in three portions—morning, noon and night.

This decoction has a red color, something like raspberry lemonade. It has an aromatic, slightly astringent taste, and it is not unpleasant to take. It has tonic properties which are of value, as preparations of iron are contra-indicated until all tendency to bleeding has ceased. Patients should take it for months. During menstruation they should discontinue it for from two or four days, according to the amount of blood lost, when it should be resumed again. Like all other remedies, it is not aspecific; in some patients it fails entirely, while other remedies, especially ergot, give relief; in other cases all hæmostatics are absolutely useless. He has found it, however, preferable to all other remedies in the majority of cases. It seems to have a most remarkable effect in neoplasms; in fibroids it very often not only relieved the hemorrhages, but also the pains. Even in cases of cancer and sarcoma of the uterus, he found it very beneficial as a hæmostatic and tonic.—*Pittsburg Med. Review*, January, 1887.

“Have secured such uniform results from the use of *Tongaline*, that I am never without it, and find it a most reliable preparation.”—L. A. STEVENS, M. D., Montour, Tamar Co., Iowa.

Book Notices.

Manual of Operative Surgery. By JOSEPH D. BRYANT, M. D.
Professor of Anatomy and Clinical Surgery, and Associate Professor of Orthopedic Surgery, Bellevue Hospital Medical College, etc. With about 800 Illustrations. New York: D. Appleton & Co. 1887. Cloth. 8vo. Pp. 530.
(For sale by West, Johnston & Co., Richmond.)

This work will be found valuable to any practical surgeon. The illustrations are very numerous, and the text is likewise graphic as to each step in an operation. There is no attempt to supplant any of the standard books on surgery by this publication; it is rather to be understood or taken as a *companion* book, descriptive simply of the *operations* to be performed. Nor is the work of practical value to the ophthalmic, aural, laryngological, obstetric, gynæcological, and other "special" surgeons, for no reference, even, is made to operations continuously required to be done by these specialists. No allusion is made to the reduction of dislocations, or to the treatment of fractures. Our criticism of the work is, therefore, not on the merit of the teachings "so far as they go," but upon the too great limitation of the range of subjects or operations described. Many things of importance to the every-day surgeon are not referred to descriptively. Bandaging, for instance, which is so essential a part of the dressing after operations, receives no attention; and yet the little operation of phlebotomy is fully detailed. Dr. Bryant has started right; his work is to be commended. But we hope when he comes to prepare a second edition he will decide to introduce many more operations, so as to be of a wider range of benefit to the general practitioner, who frequently enter, to some extent at least, upon the domain of the specialist. We instance excision of the eye-ball, operations for rupture of the female perineum, etc.

Diseases of the Lungs and Pleuræ, including Consumption.
By R. DOUGLAS POWELL, M. D., London, Fellow of the Royal College of Physicians; Physician to the Middlesex Hospital and to the Hospital for Consumption and Diseases of the Chest, at Brompton; late Assistant Physician and Lecturer on Materia Medica at the Charing Cross Hospital. Third edition, re-written and enlarged, with Illustrations, including two Lithographic Plates; being Vol. XI of Wood's Library for 1886. (12 vols. in set, price \$15.) New York: William Wood & Co.

This is a useful book to every general practitioner, as it pretty well covers every diseased condition of the lungs and

bronchi, as also those of the pleural membrane. In English-speaking communities especially, the work has received a position which ranks it as a standard authority. A valuable chapter is the one on the "Surgical Treatment of Pulmonary Cavities," although it covers scarcely six pages. About 140 pages are devoted to consumption. A striking feature of this department of the work is the prominent consideration of some of the complications of phthisis. For instance, the chapter on "Tuberculous Meningitis" in itself is a most valuable one, and would do credit to a work on practice in general.

Diseases of the Digestive Organs in Infancy and Childhood.

By LOUIS STARR, M. D., Clinical Professor of Diseases of Children in Hospital of University of Pennsylvania; Physician to Children's Hospital of Philadelphia, etc. With Colored Plate and other Illustrations. Philadelphia: P. Blakiston, Son & Co. 1886. Cloth. 8vo. Pp. 385. Price, \$2.50. (For sale by Messrs. West, Johnston & Co., Richmond).

Besides the chapters that relate specially to diseases of children, Dr. Starr introduces a chapter or two on "Investigations of Diseases," which would be a useful introductory to almost any practical book in medicine. In the special parts of the work before us, the author gives marked prominence to the importance of general regimen in the treatment of diseases of childhood—such as artificial digestion, regulating the clothing, bathing, and other elements of hygiene. The therapeutic part of the book contains also excellent advice for the physician to carry with him to the bedside. Dr. Starr has kept constantly in view his purpose to make a *useful* treatise, and he has succeeded admirably.

Diseases of the Blood and Nutrition, and Infectious Diseases.

Being Vol. IV of "A Handbook of Practical Medicine," by Dr. HERMANN EICHHORST, and Vol. XII of Wood's Library for 1886 (completing the set, price of set, \$15). Illustrated. New York: William Wood & Co.

We have had occasion to commend the three preceding volumes of this work as they have issued from the press. Now, that this fourth volume completes the work, we are in position the more favorably still to commend it as an *excellent* treatise. We like it, because it is so thoroughly practical in the description of diseases, and replete in its sections on diagnosis and treatment. It is one of the few works on "Practical Medicine" of this day that treats of the venereal

diseases in detail. Besides these subjects, this volume is devoted to the diseases of the blood and blood-producing organs, and the infectious diseases generally. Our author seems to recognize croup and diphtheria as one and the same disease, as in the section on diagnosis, while speaking of diphtheria, he does not refer to croup. In the matter of treatment, he does not seem to be aware of the wonderful American records favorable to the "whiskey plan," or "the *large* calomel doses." Numerous thermometric charts are introduced in the chapters on febrile diseases; and the many woodcut illustrations are better than we usually find them in a cheap edition of a standard work. The volume is satisfactorily indexed.

Transactions of the American Ophthalmological Society.

Held at New London, Conn., July 21-22, 1886. 8vo. Pp. 390. Dr. Wm. F. Norris, Philadelphia, President; Dr. O. F. Wadsworth, Boston, Secretary.

We find in this volume some papers of very great practical importance to the *general* practitioner. All are excellent papers, and serviceable to the specialist. Among those of special general interest, we would mention the paper by Dr. J. A. Andrews, of New York, on the Effect of Electric Light, etc., in which he shows that the *arc* electric light should be rejected as unsuitable, and actually hurtful to the human eye, particularly on account of its unsteadiness; while the *incandescent* light of Edison, because of its steadiness, adequate power and composition, is safe, and occupies at present the first position as a means of artificial illumination. The light should never shine directly into the eye, but be completely hidden from the eyes by opaque shade, and the light thrown upon the work. Dr. B. E. Fryer, U. S. Army, advocates the Use of Hot Water (140°F. and over) in some of the Conjunctival and Corneal Inflammations. He applies it by means of lavements over the lids. It is specially serviceable in corneal ulcer, and in acute purulent conjunctivitis. Dr. B. Joy Jeffries, of Boston, gives a paper on Color Blindness, etc., which should be read, and the advice or suggestions therein contained adopted as law by all parties employed as pilots on boats, engineers on locomotives, etc. Dr. S. D. Risley, of Philadelphia, gives a report of a case of Ritivitis due to Albuminuria of Pregnancy, with Embolism, Requiring Premature Delivery.

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Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

Reform in Treating Womb Diseases.

We occupied most of the space allotted to "Analysis, Selections, etc.," in the January issue with a synopsis of a paper read by Dr. Thomas Addis Emmet before the Obstetric Section, of the late session of the British Medical Association. His experience is but an iteration of that of many worthy doctors in the ranks of the profession; but the continuous record of their self-learned lessons does not have a tithe of the influence in bringing about the reformation desirable as does the expression of opinion of an authority so eminent as Dr. Emmet. The "reform movement" has needed a leader, and we trust that Dr. Emmet will at once assume that position. The medical press should also lend the weight of its influence to aid in the correction of errors of practice into which so many have fallen.

One who examines the armamentarium of the average *general* practitioner of the day, finding in the hand-pouch, which he takes with him on nearly every professional round, scarcely aught else than the speculum, the sound, the dilator, the repositor, the iodine bottle and brush, the glycerine and oakum or cotton packing, a few pessaries of a favorite shape, etc., would naturally conclude that the womb, with its appendages, is looked upon as the "root of all evil" to which human flesh is heir. So open to abuse is such a teaching that we are not surprised to learn that the

routine of the doctor's duty is thought to be accomplished when he places his patient in the dorsal or Sims' position, makes the digital examination, looks through his speculum, measures the depth of the uterus, "rectifies a mal-position," puts in a pessary, or dilates the os, applies iodine or other favorite remedy, packs with absorbent cotton wet with glycerine, speaks the hopeful word as to improvement, tells how busy he is, exhibits the pages in his visiting list to show how full they are, and makes a note to call a few days later to go through almost precisely the same routine. True, he has punched the abdomen, noted the "ovarian irritation," and prescribed for the leucorrhœa. In fact, many a conscientious doctor feels that he has done his duty if he has done these things; he has done *secundem artem*; he has done what "the books" tell him to do, and he feels that the failure of success must rest as a responsibility upon the authorities.

Such is the now popular "uterine pathology" of general diseases which Dr. Emmet and others feel called upon to combat. If an exclusive doctrine as to the *fons et origo* of diseases is to be accepted, it were better, in our opinion, if the old teachings of Abercrombie were resurrected, and the stomach be again searched for the seat of the cause of all the aches and pains that afflict humanity. But if one truth has been developed by the advances of medicine more conspicuously than another, it is the fact of the general dependence of many of the so-called local diseases upon other pathological conditions than those to which our remedies are, as a habit, chiefly applied. Hence the true specialist in medicine ought first to familiarize himself at least with the doctrine of the sympathies—the continuous, the contiguous and the remote—and their effects, as also with some of the elementary principles in physics.

In making this prominent mention of Mr. Emmet's paper, we wish to emphasize particularly the following points he brings out, which find confirmation in almost every day experience, and which ought to leave a lasting impression upon the minds of *general* practitioners:

1. The rare occurrence of most of the uterine displacements and non-puerperal womb diseases as prime *causes* of the so-called "diseases of women."

2. The common dependence of uterine diseases and displacements, leucorrhœa, etc., upon morbid conditions *outside* the womb as a centre.

3. The unimportance of uterine versions, stenosis, cervical erosions, etc., as pathological states.

4. Hence the discouraging results secured by dependence upon the repositor, sound, dilator, local applications of iodine, etc.

5. Dependence must be put upon the treatment of the conditions outside the womb which cause these "womb diseases."

Dr. Emmet's allusion to the proper use of the pessary is valuable instruction to many. His statement that he has not so much as owned a sound for many months will "take the feather out of the cap" of some who boast of its utility. His better results since he adopted his present plan of procedure will be information that will be gratifying to all who are seeking the cure of female diseases.

Transactions of the Medical Society of Virginia.

The publication of the *Transactions* of the session of this Society for 1886 have been delayed unavoidably by the slowness of the return of proof sheets sent authors. In fact, in two instances, after waiting a week on authors after due course of mails, the Publishing Committee was compelled to proceed with the publications without receiving the authors' proofs until a week or ten days later. It is a great misfortune that some authors do not comply with what is right in regard to the prompt return of proof sheets. With a full force of printers at work, it will not take over a week or ten days to "tie up" every type of the same fonts in any printing house in the South. Another cause of the delay of the publication is the much larger size of the volume this year than ever before. It will be considerably over 400 pages.

As the volume will be out before our next issue, and as between 600 and 700 copies will be distributed to most of our Virginia subscribers alone, without undertaking in advance anything of a review of the publication, we would direct their special attention to at least four of the papers which make the book cheap at the cost of annual membership (\$2). The "President's Address" (by Dr. Rawley W. Martin, of Chatham, Va.), is no ordinary routine paper, but one which will do great good to any practitioner who attentively reads it, and is a student of hygiene. The paper on "School Hygiene," by Dr. John Herbert Claiborne, of Petersburg, Va., is so replete with practical instruction for teacher, pupil and parent that it will ever remain a misfortune that it was not struck off as a separate pamphlet for gratuitous distribution among the people at the State's expense. The discussion on "Puerperal Septicæmia," from

the opening paper by the competent "leader," Dr. L. Ashton, of Falmouth, Va., clear through the reports of the desultory remarks towards the conclusion, will rivet attentive reading. Drs. Parvin, of Philadelphia, Murphy, of Washington, D. C., Brown, of Alexandria, Upshur, Moore and McGuire, of Richmond, Apperson, of Smyth county, Cullen, of Henrico county were the principal speakers; and the report of their papers and remarks alone cover over fifty pages. The paper of the volume, however, as it appears to us, showing long and patient study, careful compilation, and well defined and practical deductions is the one on "Malarial Hæmorrhages," by Dr. Otis F. Manson, of Richmond, Va., which was prepared by request of resolution of the Society some years ago, and occupies over a hundred pages. The section on "Malarial Hæmaturia" establishes that it is a disease of comparative recent development, and also that it is *blood* which is found in the urine.

Members who have been disappointed in not receiving their copies of the *Transactions* earlier will find, on receiving them this month, that they have a full reward for their patient waiting. The volume is a great credit to the Society, and illustrates some of the beneficial results of such an organization to the medical profession.

Earthquake Effects.

We examined the carefully prepared *Seventh Annual Report of the State Board of Health of South Carolina*, ending October 31, 1886, with some interest for reports of the effects of the recent earthquakes in that State, and confess to some surprise at the meagreness of the reports on this subject. In fact, Dr. Wallace, of Berkeley county, simply says: "The fearful earthquake * * * had its effect upon many in the way of *mental and nervous strains*. This is fast giving way now." Dr. H. M. Stuart, of Beaufort county, is a little more interesting. He says: "It was a curious fact to note the number of persons, both male and female—particularly females—who were *nauseated* by the shock of the earthquake. This, I suppose, is attributed to fear; but these persons, although acknowledging themselves frightened at first, disclaimed any fear during the subsequent shocks, and continued to suffer from *nausea*. In a few other cases the effect of the nervous shock from the above cause was of a much more serious nature. In one case (a young lady), it caused *hysterical convulsions*." Dr. A. A. Moore, of Camden, Kershaw county, reports that the earthquake shocks, begin-

ning August 31, 1886, "have undoubtedly had a very deleterious effect upon sick and feeble persons, being followed by much *nervous prostration* and other unpleasant symptoms. Even upon well and robust people, their effects have been striking in some instances. Some have described their *sensations as being similar to those experienced after a shock from an electric battery*. Others have experienced a very marked feeling of *debility in their lower extremities*; others have had *vertigo, nausea*, etc. Some, again, who were *not affected by these unpleasant symptoms in the beginning are now troubled by them*." Dr. H. D. Fraser's report from Charleston, refers only to the *demoralized state* of the negroes which prevents them from attending to hygienic duties, as to cleaning up premises, etc. We wish fuller reports of the effects had been made. Nothing else is said of the earthquake shocks in any of the many county reports in the entire volume of over 200 pages.

Medical Department of the University of Vermont.

We wish to call attention to the advantages of this time-honored institution for Spring and Summer tuition. We have never yet been able to understand upon what principle Medical Colleges generally have short sessions of only four or five months in the year, except upon the supposition that the Professors are not professional teachers. The University of Vermont selects the Professors from different parts of the country, *because* they are specially eminent as medical teachers in their respective homes. For instance, it takes Prof. Towles, of the University of Virginia, Prof. A. F. A. King, of Washington, D. C., Prof. Wilthaus, of New York, and others of like reputation as accomplished and professional *teachers*. This institution always commends itself to the mass of medical students throughout the country because of the season of its sessions. It opens session just as most other medical colleges close, and thus allows an opportunity for the medical student to pursue an almost uninterrupted annual tuition. Besides, the location at Burlington, Vermont, is favorable to the prosecution of academic or scientific studies during the summer months. In this connection, we wish to direct the special attention of our readers to the advertisement of this University, published in this journal. It is needless to add that thoroughness of instruction, and the requisite of proficiency for diplomas are among the characteristics of this justly eminent institution. This institution is of special interest to the Southern student, whose summer

home is in a climate that is not conducive to the exercise of mental application.

Alumni Dinner of University of City of New York.

The sixteenth annual dinner of the Alumni Association of the Medical Department of the University of New York was held at Delmonico's on the evening of January 27th. Dr. Drake presided. The Chancellor, Dr. John Hall, being absent, his place was occupied by Vice-Chancellor McCracken. There were present 125 guests. The first toast of the evening was "The University," to which the Vice-Chancellor responded. He referred in appropriate terms to the anonymous contribution of \$100,000 to the College through the influence of Dr. A. L. Loomis. Other toasts responded to were "The Pulpit," by Rev. W. S. Rainsford, D. D., of St. George's Church; "The Bar," by W. A. Purington, Esq.; "The Medical Department," by Dr. R. A. Wilthaus; "Alumni," by Dr. R. C. M. Page; "Charities and Correction," by Commissioner H. H. Porter; and "The Press," by Stephen Fiske, Esq. Appropriate addresses were also made by Drs. Fisher, A. L. Loomis, and Samuel Hall. The President, Dr. Drake, closed the ceremonies with a brief and appropriate address.

Dr. James A. Alexander, of Citra, Florida.

We are pleased to hear that our friend, lately of Broadway, Va., is pleased with his new home and is already busy, and has encouraging prospects. We have no fear but that he will be as highly esteemed by acquaintances he may form in Florida as he was by friends in Virginia. He will retain his Fellowship in the Medical Society of Virginia, and expects also to join the Florida society. We wish him the success he so richly merits.

Reich's Hungarian Wines.

Our acknowledgments are hereby made to Mr. Lorenz Reich, 334 Fifth avenue, New York, N. Y., for a large case of Hungarian wines. While all of them are excellent, we have been specially pleased with the "Tokayer Ausbruch," which is retained on the stomach when other needed alcohols are rejected. It has acted better than champagne in relieving the sickness of pregnancy, besides possessing all the other benefits of good wines. We are glad to learn that arrangements are contemplated by which Mr. Reich may furnish his wines from this city as well as from New York and his branch office in Chicago. The Tokay Ausbruch is sold in cases of twelve bottles for \$30.

The College of Physicians of Philadelphia,

At its Annual Session, held January 3d, 1887, complimented the South in conferring the title of Associate Fellow upon the distinguished surgeon of our city, Dr. Hunter McGuire. The like honor was bestowed upon Drs. T. G. Thomas, Senn, Cheever, Bowditch, and other illustrious doctors of the country.

Maltine Preparations.

Dr. G. E. Matthews, of Ringwood, N. C., in a recent personal letter to us says: "I have recently been using maltine in several different forms as prepared by the Maltine Manufacturing Co., of New York city, and have found it a most excellent prescription for all the wasting diseases or chronic diseases of the stomach and bowels. It has proven of great value in all the cases in which I have used it, and I cheerfully recommend it as superior to any preparations of the kind I have ever used. Call the attention of your readers to the maltine preparations. The advertisement is in your journal."

Southwestern Medical Gazette.

The first issue (January) makes a winning entrance upon the journalistic carpet—well edited by Drs. Coomes and Marvin, and well published. The contributions intended for its pages have been so numerous that a number have to lie over until February. The subscription price is only \$1. Having its home in Louisville, Ky., it seems to us a misnomer to dub it *Southwestern*.

The Columbia Bicycle Calendar for 1887.

Received from the Pope Manufacturing Co., of Boston, is an artistic and elegant work in chromo-lithography and in the letter-press.

The Virginia Medical Monthly and the Western Medical Reporter, of Chicago.

for one year, \$3.50 instead of \$4. Try the two for one year. "They won't hurt you."

Cocaine Habit.

Dr. J. B. Mattison, 314 State street, Brooklyn, N. Y., requests full reports of any cases of cocaine addiction coming under the knowledge of any of our readers. He will pay any expense incurred and give full credits in a coming paper.

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Original Communications.

ART. I.—**Diagnostic Value of the Phosphates in Pregnancy.***
Illustrated. By WM. B. GRAY, M. D., Lately Vice-President Medical Society of Virginia, Richmond, Va.

Mr. President and Gentlemen: On the 15th of January, 1883, I had the honor of writing and reading a paper on the Phosphates—generally considered—before the Richmond Academy of Medicine. This was published in the *Virginia Medical Monthly* for March of that year. I then incidentally referred to these salts as an aid in the diagnosis of conception.

In compliance with your request, by which I am again further honored, I now ask your attention to the special consideration of the *Diagnostic Value of the Phosphates in Pregnancy.*

As preliminary and pertinent to my subject, I remark that phosphorus is the great cerebro-spinal food or fuel. When combined with the alkaline bases found in the body, such as lime, soda, etc., phosphoric acid forms the salts known as phosphates. Now, as the kidneys constitute the great sewer

* Read before the Richmond Medical and Surgical Society, Jan. 25, 1887.

of the body, we naturally turn to their excreta, the urine, to ascertain the normal and abnormal elimination of these salts. Thus appealing, we ascertain that about $\frac{1}{6}$ of a grain to the drachm, or about 59 grains per day of 24 hours, may be regarded as a fair average in the urine of healthy persons, free from extraordinary physiological influences. It may be well here to state that our plan of analysis and ascertainment is that advised by Dr. Tyson, of Philadelphia, which consists in the use of his magnesian fluid (composed of one part each of aqua ammonia, muriate ammonia, and sulphate magnesia, and eight parts of water). About $\frac{1}{3}$ as much of this chemical as you have of urine will precipitate all the phosphates found in urine, both alkaline and earthy, in twenty or thirty minutes. For convenience, I place in the smallest size test tube $\frac{1}{8}$ or $1\frac{1}{4}$ inch of urine, add the chemical, and set aside for subsidence. By repeated experiments, I have ascertained that each $\frac{1}{8}$ of an inch of precipitate is equal to $\frac{1}{3}$ of a grain of these triple phosphates to one drachm of urine.

Now, I suppose no one will deny that the amount of fuel consumed will necessarily determine the amount of resultant ashes consequent thereupon, whether the same be wood, urea, or phosphates. The amount of phosphates found in urine determines the amount of fuel consumed by cerebro-spinal activities. Hence, we find them largely increased in all hyper-taxations of this system, whether the same be due to diseased conditions of these centres or their unusual physiological exercise. It is well known that almost all neurasthenias and many cerebral troubles are examples, on the one hand, while on the other, most, if not all, under tense mental strain, such as lawyers, clergymen, doctors, etc., will be demonstrative. The greater the demand for fuel, the larger the results, *pari passu*, from such consumption of pabulum. When the expenditure exceeds the daily replenishing, then cerebro-spinal hunger is necessarily inaugurated. We are all painfully familiar with the decaying teeth, odontalgia, otalgia, and a host of other nervous manifestations so common in pregnancy. Why are these almost invariable concomitants? They are but the voice of neurasthenia, hydra-headed and physiological, and due to the large deflec-

tion of phosphorus from the mother's wants, and its appropriation to, and consumption in, the maturation and manufacture of an entirely new creature. Hence, the parent furnaces are starving for food and fuel, and raise their multitudinous voices for sustenance—support—pabulum.

After all I have said and tried to demonstrate, you will not be surprised for me to claim that the excreted phosphates are always increased in the urine of gestating women. In further testimony of this truth, I appeal to the test tube, and submit fifty-four analyses of the urine of pregnant women, without selection of cases, from my large collection. Of these, the smallest amount of the phosphates found in one drachm of urine was $\frac{1}{3}$ of a grain, and the largest $2\frac{1}{2}$ grains. The latter sample was from a consumptive patient.

Twenty-four patients are embraced in the fifty-four analyses; and from eight patients more than one analysis was made, at different stages of gestation. Thus, in patient No. 1, eight analyses were made with an average of $\frac{5}{8}$ of a grain of the phosphates to 1 drachm of urine; in No. 2, two analyses, with an average of $1\frac{1}{4}$ grain to the drachm. Samples from this patient contained albumen. In No. 3, three analyses were made, and gave an average of $1\frac{1}{2}$ grain to the drachm. This patient had pulmonary tuberculosis. No. 4 gave an average of $1\frac{1}{6}$ grain to the drachm. No. 5, seven analyses, with an average product of $\frac{5}{7}$ of a grain to 1 drachm of urine. This patient uniformly passed an excessive daily amount of urine, though on two days it measured $2\frac{1}{2}$ pints each a day, and on two others 2 pints a day. No. 6, with six analyses, gave an average of $\frac{1}{2}$ grain to the drachm. This patient, on the ninetieth day of gestation, voided 6 pints of urine, which yielded $\frac{1}{3}$ of a grain to the drachm. She afterwards excreted $2\frac{1}{2}$ and 2 pints urine a day. No. 7 had five analyses made, with an average of $\frac{5}{9}$ of a grain to 1 drachm of urine. In No. 8, five analyses were made, with an average of $1\frac{3}{5}$ of a grain of the phosphates to the drachm. This patient voided 2 pints urine one day, and 3 pints each on two other days. The $2\frac{1}{2}$ pints were voided on the 150th day of gestation, and on this day the phosphates measured 1 grain to the drachm. The 2 pints were excreted on the

180th day, and gave $\frac{1}{2}$ grain of the phosphates to the drachm of urine.

The increase in these salts does not seem to be regularly progressive as gestation advances, though always in excess of the normal. For example, at fifty-one days of gestation we find 1 grain of phosphates to the drachm, while at 273 days, only $\frac{2}{3}$ of a grain was obtainable. Once more: from the same patient on the 75th day we find $\frac{1}{2}$ grain to the drachm, while on the 263d day we precipitated $\frac{5}{6}$ of a grain to the drachm. Mrs. —, on the 150th day, voided $2\frac{1}{2}$ pints urine, containing 1 grain of these salts to the drachm, while on the 180th day, although passing precisely the same amount of urine, only $\frac{1}{2}$ a grain could be made out.

Believing that the foregoing constitutes a sufficient array of testimony, both hypothetic and analytic, to warrant my



Fig. 1.

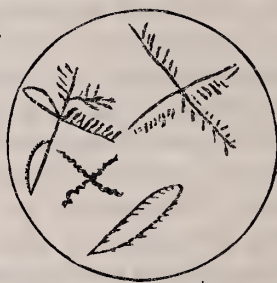


Fig. 2.

deductions in the premises, I turn now to consider corresponding changes in the microscopy of these salts.

The *normal triple phosphate* (Fig. 1) is more or less a stellate figure, and *markedly feathery*. Sometimes the stella is segmented, and one leaflet stands alone to itself. Whether we see it in bold relief as a star, or dismembered as a solitary leaflet of the same, the feathery character is always to be remarked on both sides of the centre fibre of each leaflet. To know and *thoroughly understand* this will properly prepare us for the better appreciation and comprehension of the abnormal phosphate.

Now, as soon as conception occurs, or within twenty days thereafter certainly, the *feathery* portion of the stella, or segment thereof, begins to disintegrate (Fig. 2). This decay,

so to speak, may progress from the apex towards the base of the crystal, or may declare itself by destroying progressively the feathery contribution of one-half the leaflet, the centre fibre of the same determining and defining its boundaries. If a stella is found in comparative integrity, it will be seen shrunken, and withered and distorted, as a tender plant withdrawn from its bed in the earth, and exposed to the heat and wilt of the unfriendly sunshine.

Please refer to the slide (Fig. 2) of Mrs. R's case, at twenty days of gestation, and contrast it with that of Mrs. A., at



Fig. 3.



Fig 4.



Fig. 5.



Fig.

sixty days (Fig. 3). Now, with the latter study, by contrast the slide of Mrs. T., at ninety days (Fig. 4). Notice how much more distorted and irregular the phosphates are becoming. But perhaps the metamorphic changes will be made more apparent and satisfactory by confining and restricting my remarks to the seven slides furnished by Mrs. A. at different stages of the same gestation (134 days, Fig. 5; 150 days, Fig. 6;

182 days, Fig. 7; 212 days, Fig. 8; 242 days, Fig. 9; 272 days, Fig. 10). Please study them after the explanation already attempted to be supplied you in this paper. Note



Fig. 7.



Fig. 8.



Fig. 9.



Fig. 10.

their almost complete dismemberment and scarcely recognizable identity as phosphates.

(By way of parenthesis, I remark the frequent appearance of the urate soda about the third month. It rarely appears after about the seventh month.)

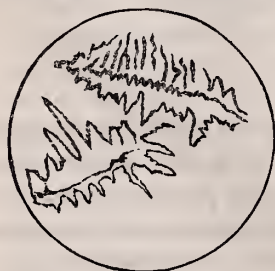


Fig. 11.

Past the middle of the seventh month, the phosphates begin somewhat to approximate their pristine form and general character, and at the *accouchement* can scarcely be differentiated from the normal. It is likewise true that when the foetus perishes during the gestation, the phosphates at once recover their normal character in all respects. To complete compari-

son, see Fig. 11 (page 834), from the same patient thirty days after delivery, while she is nursing.

In conclusion, if I have made myself well understood, and interested you in further pursuing the important, profitable and instructive subject, my object and aim have been served to the best of my ability, and my highest wishes are attained.

ART. II.—Modern Trachelorrhaphy—What is It?—With the Report of Six Cases.—Four with Cocaine as the only Anæsthetic. By I. S. STONE, M. D., Member of Virginia State Medical Examining Board, etc., Lincoln, Va.

“Emmet’s operation” has been so much discussed in recent years, as to apparently render further remarks in regard to it superfluous. It has, however, undergone a marked change in its performance recently, having been robbed of its greatest terrors, by substituting a satisfactory local anæsthetic in lieu of the more dangerous ether or chloroform. This paper is prepared, then, mainly to call attention to this fact; and I shall, for the most part, leave out all reference to the discovery and promulgation of this important surgical procedure, which information, if not already well known to the profession, is easy of access in Emmet’s *Gynæcology* (pp. 445–480, inclusive).

The necessity for the performance of this operation may never occur to very many practitioners of medicine, who have never seen it performed, or witnessed its results. We frequently read in medical literature criticisms, often adverse in their character, of this procedure, and even reinforced by words of the master himself, to the effect that the operation is being abused in the hands of poor operators, and that he now comparatively rarely performs it, etc. Foreign writers, generally, are slow to accord Dr. Emmet the credit, and to his operation the importance that belongs to it. Many of them have unjustly claimed that Emmet and American operators sew up every fissure, however slight, in the cervix. But this is altogether too sweeping an

assertion, and one of which there is no proof. Certainly, time—the great judge—and experience—the great teacher—must bring to us the legitimate sphere for this operation, about which there is so much controversy.

I might just here presume upon the ignorance of the profession, and enter upon a detailed account of expert opinions as to the necessity for sewing up a torn cervix uteri; but I need not do this, and will merely make this statement, and believe I am expressing the opinion of the best writers and the best operators in the domain of American gynæcology, when I say, *there is no one operative procedure within the grasp of the profession in the United States especially, productive of as much benefit to poor, weak and nervous women as trachelorrhaphy.*

It is admitted by all that the cervix uteri always sustains a laceration in the first labor. This may be more or less in extent, and may cause immediate disaster. It is fortunately true, that most cervicæ recover their normal condition (at least as nearly as they ever do) without giving rise to any *symptoms* which would attract the attention of the physician. Every gynæcologist should be compelled to serve some years experience as obstetrician. He should learn what a cervix looks like and feels like for at least two weeks after labor. We should then hear less about *immediate suture* of the cervix after parturition. I am forced to the belief that until recently, obstetricians seldom did, and gynæcologists never did, make a systematic and thorough ocular inspection of a sufficient number of *post partum* cases to know *sans doute* in just what manner the uterus, and especially the cervix uteri, returns to its normal size and form. We find occasionally that the patient is "slow in getting up." The cases requiring "Emmet's operation" come largely from this class. The professional eye must never permit the cause to be unknown, *for there is always a cause.*

Again, we find some women who have sustained quite severe lacerations during labor, and yet have not become invalids. This is the great stumbling-block of the opponents of trachelorrhaphy. They cannot see the need of an operation, unless the lesion in question produces a definite set of

symptoms, always the same results, and of sufficient magnitude to require operation to save life itself. I have not space here, neither have I the inclination, to answer this at length. But we all know full well the great ability some patients possess, to brave the onset of disease, and it does not then seem necessary to discuss the point further.

Again, we find a severe laceration to heal so rapidly with returning health, as to astonish us, and these cases force me to the conclusion that when a laceration does not heal soon after labor, the cause was a local or constitutional one, affecting that patient at that time, which may have gradually disappeared or not, as we find the patient in good or bad condition. We must admit, then, that some of our patients do not entirely recover after their lying-in. They may have had more or less severe septicæmia, and possibly had suppression of the lochial discharge, or the opposite—hæmorrhage from rupture of the circular artery of the cervix, which bleeds during the alternate contraction and softening of the uterus, after delivery.

The symptoms of this lesion are variable. There is generally profuse leucorrhœa and pelvic pain. The pain may be neuralgic or from cellulitis, more or less chronic. The back-aches of such sufferers are only too well known to most physicians. These pains may be owing to diverse causes, including displacements of the uterus from subinvolution, a frequent result of laceration. The pelvic organs generally sympathize with the uterus, and we thus have cystitis, proctitis, ovaritis (?) etc.

Irregularities of the menses are also noticed, and menorrhagia is a common attendant of this lesion. Dysmenorrhœa and metrorrhagia are occasionally present, and abortions occur frequently, where sterility is not the rule. The patient's nervous system almost surely suffers from these causes. Thus we often have hysteria in many or any of its forms.

Therefore, given a patient who presents any or the most prominent of these symptoms, who has been treated for cervical erosion, perhaps, or has had other and unavailing treatment, without the discovery of a cause for her ill health,

we should make a proper examination of the pelvic organs, to ascertain if there be a cause there. If at this examination, no cause for ill-health is found, save the laceration, then this lesion should receive the proper treatment. With the index-finger, the laceration may be discovered by an expert, but it is only possible to know fully the extent of the tear by using a Sims' speculum (or its equivalent), and then, under a good illumination, separate the lips of the cervix. Emmet uses a double tenaculum for this, but I have used, with much satisfaction, a pair of dressing forceps, and what is much better, a uterine dilator, such as Goodell's. By gently inserting this, or a similar one, to the depth of an inch or more, we may ascertain the real depth of the laceration. It will be found that the mucous membrane covering the cervix, though torn at the time of the laceration, with the tissue of the cervix proper, unites rapidly down to what appears to be the normal site of the os. By dilating the os properly, this can be seen at a glance; and also that the cervix may be lacerated in two or more lines extending towards or through the internal os. In operating to close the laceration, this membrane must be well cut through, to admit of perfect denudation and coaptation of the lips of the cervix.

Physicians differ greatly in reference to uterine pathology, probably often from a misconception of terms. I must here express my adherence to Dr. Emmet's views in regard to elongated cervices, and in reference to ulceration of the cervix. I have never seen a case, in sixteen years of observation, of either elongated cervix or ulcer of that organ, but that was either malignant or syphilitic. I have seen the "elongated cervix" and the so-called "ulcer of the neck of the womb" disappear as if by magic, after having resisted many weeks, sometimes years, of treatment by caustics, iodine, etc., by the performance of "Emmet's operation."

It is useless to say that laceration of the cervix may occur in quick labors. This is true, as is its converse, that laceration may occur in what may appear to be a perfectly normal labor. It may thus occur without the knowledge of patient or physician, as I have attempted previously to show, that

lacerations are known as such, because of *non-union* more than by observation, during or immediately after labor.

The perineum is often torn and demands repairing, to give the patient full chance for recovery. It is beyond question, that a torn perineum does provoke pelvic disease, and frequently causes much annoyance, on account of admitting air into the vagina.

It is best to institute some form of preparatory treatment prior to performing the operation. Thus, iodine, tannin and glycerine may be applied to the cervix tri-weekly for two or three weeks. If there is any evidence of an old cellulitis, or other disease of the pelvic organs, the hot vaginal douche must be used. The douche apparatus of the present day leaves nothing to be desired. Several gallons of hot water, at temperature of 110° to 115°F. may be used, with no discomfort to the patient, once a day.

It having been decided that an operation is demanded, it is better not to delay its performance unduly. Patients grow excited and frequently skeptical, and have abundant opportunity to hear of all the possibilities of failure. Neither should the important fact stated by Emmet be forgotten, that epithelioma of the cervix almost invariably commences in the bottom of a laceration. (*Vide Emmet's tables.*) The regular application of powerful caustics seems now to be almost universally condemned. So far as my experience goes, they do no good in this lesion. In short, if we have a real laceration to deal with, let the treatment be undertaken with that in view, and operate at the right time and in the right manner. In fact, it is useless expense and annoyance on the part of the patient, to submit to treatment for months to accomplish that which may be done in a short time, and without pain, or even much discomfort.

To show the benefits to be attained by "Emmet's operation," and especially the improvements as now practiced, I will report the following cases:

(I.) Mrs. H., æt. 45, had been bedridden for six years. The entire round of hysterical symptoms had been practiced, and the most that could be done with medicine had been done for her relief, without effect. Abundant leucor-

rhœa, severe menorrhagia, and pelvic neuralgia had worn the patient out. Preparatory to trying the "Weir Mitchell treatment," on April —, 1884, I closed an extensive laceration of the cervix, removing a V-shaped piece of eroded tissue, having the appearance of a commencing epithelioma. After removing this piece, and closing the wound and laceration with eight wire stitches, the size of the cervix was reduced to two-thirds its former dimensions. At the same time, to prevent the descent of the uterus, I performed an elytrorrhaphy, which was only partially successful, as the nurse left the catheter out of the bladder during a whole night; thus the stitches were torn out by a distended bladder. The perineum was also closed at the same sitting after the plan of Emmet. The result of the operation on the cervix was perfect; the leucorrhœa almost entirely ceased. At this writing, her cervix is about the normal size. The result of the closure of the perineum was also union by the "first intention." I was assisted in this operation by three of my professional friends, Drs. Janney, Keen and Welty; also by two excellent nurses. Ether was used as the anæsthetic. Time of operation, about two hours. This lady is now quite fleshy, and has the appearance of perfect health.

(II.) Mrs. B. W., æt. 43, had been an invalid for three years since the birth of her last child. She had menorrhagia and frequent abortions, with abundant leucorrhœa, and the usual nervous symptoms—palpitation of the heart, etc. A laceration had been detected by Dr. Keen and myself, at different times, while attending her during miscarriage. After a short period of preparatory treatment, she was ready for operation. I was assisted by Drs. Taylor and Keen, besides two nurses. Ether was used as the anæsthetic. The laceration was on the right side in this case, and required five silver sutures to close it. At the same time the torn perineum was closed. Both operations were completely successful. The patient was kept in bed three weeks. No more abortions occurred. The leucorrhœa ceased. From a slender woman, weighing 110 pounds, she gained in flesh thirty pounds in six months. No further menstrual pain or menorrhagia occurred. Nervous symptoms required no further treatment. She had, up to the time of the operation, almost continually to take medicine, and employ physicians; since that time, but rarely.

(III.) Mrs. C. W., æt. 37, has two children. Since the birth of her first child, five years ago, she has had poor health—dysmenorrhœa, nervous symptoms, leucorrhœa, ute-

rine prolapse to the second degree, and torn perineum. She also has a floating spleen, which was supposed by her medical attendant to be the *uterus misplaced upwards*. Consequently, the carrying out of his orders to frequently push it down to its place, very much aggravated the case. Examination showed bilateral laceration, with considerable erosion of the posterior lip. With but little preparatory treatment, this patient was operated upon at her home. I had no other help than my nurse and another lady. The operation was soon completed, and cocaine was the only anæsthetic. Thirty minims of a ten-per-cent. solution were injected by hypodermic syringe into four points *de selection*, two in each lip of the womb, using only six or eight minims at each insertion. The cocaine solution was also thoroughly applied over the surfaces about to be denuded. In less than ten minutes the operation was proceeded with, and completed in forty minutes. Only two silver sutures were used—one on each side of the new os. Two additional sutures of catgut were used on each side. The torn perineum was also closed, using catgut sutures in the vagina, and one stout silk suture at the fourchette. No pain whatever was experienced during the operation. The operation was, indeed, a pleasant affair. There was no danger to be apprehended from the anæsthetic, and to be chatting with the patient, in good humor, was, at such a time, an experience equally novel and delightful. The loss of blood in this case was insignificant, but my experience with the three following cases does not show the hæmostatic properties of cocaine to be of any value. Perfect union occurred at once, and the only sutures to be removed were the two wires at the os, and one silk one at the fourchette. Only traces of the catgut sutures could be found. The patient is now wearing an Albert Smith pessary, and her only discomfort comes from her floating spleen.

(IV.) Mrs. X. W., æt. 31, had suffered with a severe attack of puerperal septicæmia, following the birth of her third child, two years previously. She came under my care on August —, 1886, suffering from symptoms of pregnancy. In fact, she had all of the rational symptoms and signs, including enlargement of the abdomen. Examination revealed a severe laceration on the left side, but no pregnancy. As the remains of an old cellulitis were distinctly present, I treated her for a few months, hoping to remove this source of danger. At last, on November —, 1886, I operated; having, as before, only my nurse and another lady to assist

me. Cocaine afforded entire immunity from pain, so far as the operation was concerned. The speculum caused the only discomfort. Perfect union resulted, and the sutures were removed in eight days. I used the same number of silver and catgut sutures as in the previous case. This patient had, on the third day after the operation, an increased temperature and considerable pelvic tenderness, which gave evidence of a return of cellulitis. Although, I was careful not to drag the uterus down very far, the symptoms indicated how easily an old cellulitis can be lighted up. This patient has since, slowly, though safely, recovered, and has the appearance at this time of good health.

(V.) Mrs. C. W., æt. 44, had three children. She has had symptoms of laceration of the cervix since the birth of her second child, now aged sixteen years. She had undergone treatment at the hands of several prominent physicians in Baltimore and elsewhere. Caustics had been applied to the everted lips of a bi-lacerated cervix, until they resembled cartilage more than healthy cervical tissue. Abundant leucorrhœa, nervous symptoms, and dysmenorrhœa, etc., kept the patient constantly using remedies, and fearing invalidism. After due preparatory treatment, she was operated on, November —, 1886, assisted by Dr. Welty, of Hamilton, and my nurse, with cocaine, as before, as the only anæsthetic. This patient had the most extensive laceration of any of my cases; consequently, the amount of denudation was great. The large and long lips were rolled nicely together, and the result has been perfect in every particular. This patient has, since her operation, undergone more exercise from walking, and in other ways has withstood more strain than before it for years, without suffering. The effect of the cocaine was excellent, although the hæmorrhage was more than usual. The cervix uteri at this time is not more than two-thirds its former dimensions.

(VI.) Mrs. B. W., æt. 33, has two children. With her last child, aged three years, she had a tedious labor, followed by cellulitis from septicæmia. She soon recovered from the septic attack, but the cause remained in a laceration of both sides, but worse on the left. This prevented the uterus from returning to its normal size, and resulted in retroversion of the womb, with constant bearing down pains, and with tenesmus, which was much increased during her menstrual flow. Owing to the many difficulties in this case, I treated her for three months, so that she might be ready for operation. She had improved so much by the end

of this time, as rather reluctantly to consent that an operation was necessary to prevent a return of her maladies. Assurance was given that she would suffer no pain, and that the worst would be an inconvenience, and she finally consented. Accordingly, on December —, 1886, assisted, as before, by two women only, I closed the torn cervix in the usual manner, using the silver and catgut sutures, as in other cases. The only unpleasant symptom was the tenesmus, caused by the speculum. The operation was soon completed, and union in eight days was complete. The patient still suffers somewhat from tenesmus, which may be removed when the position of the uterus is entirely corrected. All of the other symptoms have been removed by the repair of the cervix.

It seems to me pardonable, to draw attention to the vast difference between this operation as thus performed, and the same as done a few years ago. I have seen it skillfully done at the Woman's Hospital, in New York City, by Drs. Emmet and Hunter, and their assistants were many—one for the anæsthetic, one for the legs of the patient, one or two for speculum, and retractors, besides nurses for sponges and instruments.

The administration of chloroform or ether must add an element of danger in any case of this kind, and should be hereafter dispensed with, when a local anæsthetic will answer. Cocaine has in my hands produced no ill effect. One patient was considerably stimulated by it, but was not at all alarmed. Another one conversed rather more fluently than usual, but did not know that the cocaine was the cause thereof.

I have not used the catheter in a single case of trachelorrhaphy alone; neither have I resorted to it for the repair of a lacerated perineum. I have used the vaginal douche in only two cases following the operation.

Hereafter I shall use the douche only when there is hæmorrhage following the operation. I use boric acid, finely pulverized, quite freely, and a cotton tampon, for four or five days. The boric acid prevents all possibility of septic disturbance.

In closing this paper, the question in regard to the advisability of performing the operation arises, and I refer the reader

to the results in the above six cases for the answer. Every reader of current medical literature for the past ten or fifteen years, must know the opinion of the best operators. Surely Emmet, Thomas and a host of others, would not be united in their testimony as to the necessity and results of this procedure, without having great weight. I am confident that any operator having a real experience with its performance, will never give it up. It may be true that sterility is caused by it, as it certainly can be thus caused. But these women are unfit to bear children, and they are generally sterile before the operation. Neither is it necessary to produce sterility by its performance.

In what manner the good results come, it is difficult to say. Medical literature is already full of attempts to explain it. It is good surgery, however, to close the fissure, to cut away cicitricial tissue, and to stop excessive leucorrhœa. These alone are sufficient to cause disease, and their prevention must result in good to the patient. At last, if the operation cures by its mere psychological effect, there can be no reasonable objection to its performance.

ART. III.—**Electro-Osteotomy in Knock-Knee, Bow-Leg and Anterior Tibial Deformities.*** By MILTON JOSIAH ROBERTS, M. D., Professor of Orthopædic Surgery and Mechanical Therapeutics; Visiting Orthopædic Surgeon to the City Hospitals on Randall's Island, etc. New York, N. Y.

Knock-knee, bow-leg and anterior tibial deformities have of late years been the subject of much study by European surgeons; and renewed interest in this class of deformities has been awakened in all parts of the world on account of the operative procedures which have been instituted for their correction.

Probably, by far the most common cause of these more or less unsightly aberrations of the bones of the lower extremities is found in that general condition of osseous mal-nutri-

*A Clinical Lecture delivered at the New York Post-Graduate Medical School and Hospital, July 22, 1884.

tion and arrest of growth denominated rachitis. In fact, some authors* go so far as to advance the theory that there is "no *à priori* reason for considering that genu valgum, varum, and other osseous curves of the lower limbs arise from any other than a rachitic condition." On the other hand, we have some who, so far as knock-knee is concerned, wholly ignore rachitis as a causative factor, and take the absurd and untenable ground that "it results from weakening of muscular support" together with "stretching of the internal lateral ligaments."† Now between these two extremes various etiological views have been expressed and more or less thoroughly reinforced by clinical and other data.

Through the courtesy of Dr. Sarah J. McNutt, I am able to bring before you to-day a very interesting family of children. The patients, five in number, constitute the living members of a progeny of eight children having the same parentage. (See Figs. 1, 2, 3, 4, 5, all from actual photographs by Mr. James U. Stead.) Every one of these children, as you will see at a glance, has more or less marked deformity of some of the bones of the lower extremities. The idea of heredity naturally suggests itself to one's mind in explanation of the occurrence of these deformities. The mother, however, as you can see for yourselves, has no deformity of the lower extremities, and I am credibly informed that the father also has straight legs. Other causes must therefore operate in the production of these deformities. The parents of these children are extremely poor and have always lived under the most disadvantageous hygienic surroundings. Neither they nor their children have had a sufficient amount of suitable diet, and the father, though apparently a robust man, is a drunkard. The mother is now in the last stages of consumption, and at best can live but a few weeks longer.

The first child born to these parents (see Fig. 1,) was a male who is now eleven years of age, and though apparently healthy at birth, was sick a great deal during his infancy. He began to walk at eighteen months of age. He was, how-

* William Macewen, M. D., *Osteotomy*, London, 1880, p. 4.

† Louis A. Sayre, M. D., *Orthopedic Surgery and Diseases of the Joints*, 2nd edition, p. 543.



Fig. 1.

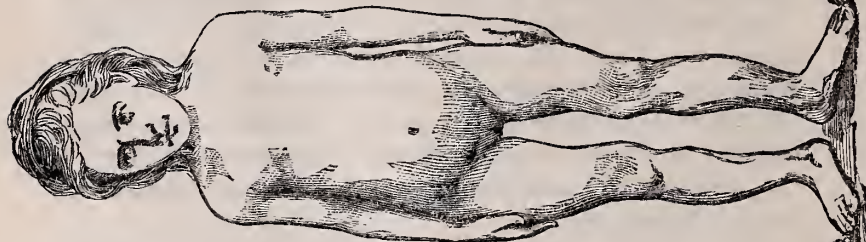


Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.

ever, four years old before he could speak. The fontanelles remained open for a long time, and the in-knee deformity which was first observed when he began to walk, still exists, though at no time has it been very marked. His teeth, in common with those of all the other children, are irregular and more or less decayed.

The second child, a female, (see Fig. 2,) is now ten years of age. At birth she was a well nourished infant and continued in good health until she began teething, after which time she had a great deal of sickness. She was nursed till she was seven and a half months old when the mother was directed by her physician to cease nursing the child as she (the mother) had consumption. This child has had, from time to time, a swelling of the glands of the neck. There is now an antero-lateral curvature of both tibiæ and both fibulæ, and a marked incurvation of the spinal column in the lumbar region. She has a large and pendulous abdomen.

The third child, also a female, only lived to be four months old, and was sickly during all that time. Her abdomen was very large and pendulous, and the fontanelles were widely open. The mother had a very bad cough while carrying this child, which continued after her birth, and consequently never nursed her. This child is said to have died from "scrofula." No deformity of the legs was noted by the parents.

The fourth child, a female (see Fig. 3), is now seven years old. She was apparently strong and healthy at birth, and the mother nursed her about five months. Her troubles began when she was eight months old, and she has been sick every summer since. When three years old, she had the measles, and this was followed by a severe attack of conjunctivitis. It was at this time that she first began to walk, and the mother states that the in-knee deformity was very marked indeed. She was then taken to the Hospital for the Ruptured and Crippled, in this city. Cod-liver oil was prescribed, but no mechanical appliances were used. With the general improvement in her health, the in-knee deformity diminished, but it has been for some time stationary.

The fifth pregnancy resulted in a miscarriage at the sixth month.

The issue of the sixth pregnancy was a female child, who is now four years and three months old. (See Fig. 4.) The mother states that she was apparently healthy when born. This child was nursed by the mother for about five months. When eight months old, she had pneumonia, and this was

followed by summer diarrhœa. When a year and four months old, the mother first noticed the existence of lateral curvature of the spine. She did not commence to walk until she was three years of age, at which time the parents first became aware that she had a marked in-knee deformity in both lower extremities. In February of the present year, the mother took the child to the Hospital for the Ruptured and Crippled, where the regulation spinal apparatus and leg splint furnished by this institution were applied. Owing to the mother's sickness, she was unable to attend to the treatment of the child, and the wearing of all apparatus was soon abandoned. This child's teeth are badly decayed and very irregular. She has only just begun to talk, and as yet can only speak a few words. There is a marked lateral curvature of the spine, and an antero-lateral curvature of both femora, together with a marked in-knee deformity in both limbs. It is this latter deformity that I shall endeavor to correct to-day by means of an osteotomy operation. In the performance of this operation I shall use the electro-osteotome as the bone-cutting instrument.

The issue of the seventh pregnancy was also a female, who is now three years old, and still unable to stand. (See Fig. 5.) Though a small infant, she is said to have been apparently healthy and strong at birth. The mother nursed this child for three months. When eight months of age, she is said to have had malaria, and during her second summer was troubled a great deal with diarrhœa. She has never had any of the diseases incident to childhood, except possibly the measles, but of this the mother is not certain. Last winter, there was a discharge from her left ear, and the glands of her neck became much swollen. She suffers at present from incontinence of urine. In sitting, she keeps her legs crossed, and even attempts to creep while they are in this position. There is an in-knee deformity of both limbs, which is most marked in the right; also an antero-lateral curvature of both femora, but there is no spinal deformity.

The eighth child, a boy, died when seven months old, just a year ago to-day. At birth, he weighed about thirteen pounds, and the mother states that he was the finest-looking child she has ever had. She nursed him only about six weeks. There was no deformity of the legs observed in his case. He was a strong child, and the mother says that he was able to stand on his feet when but five months of age. He died at the end of seven months from "gastric fever." This ends the sad history of a wretched family.

Having given you a brief history of all the members of

this family, I shall proceed at once with the work of correcting the in-knee deformity of the case illustrated in Fig. 4.

It is always desirable, prior to treating a patient, to make such record of the deformity as will convey an idea of its character and extent. I shall, therefore, make these observations before proceeding further. To determine the degree of deformity, I shall make use of an instrument of precision—the articular goniometer (see Fig. 6)—which I invented

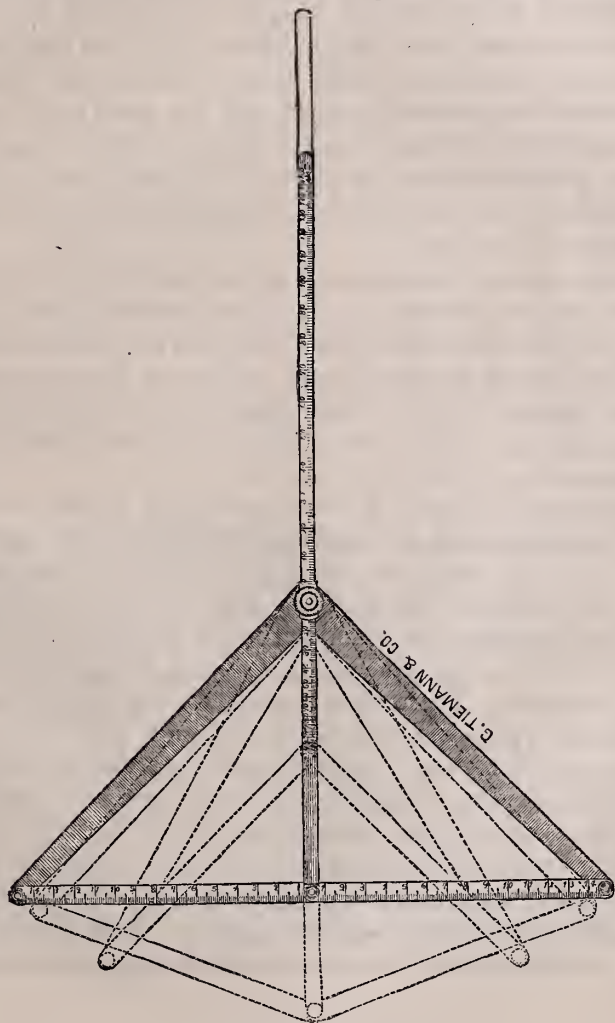


Fig. 6.

some time since for determining the extent of angular deformities. This instrument, as will be understood from the figure, is so constructed as to measure the actual inclination of the mesial or right and left (dextro-sinistral) planes of two adjacent segments of the limbs or body, or the inclination of the flexor or extensor aspects of the same, no matter how great the deviation from the normal may be, providing the deviation is confined to one plane. When adjusted so as to correspond to the desired imaginary plane, the degree of deformity is read off on the graduated arm of the instrument. By means of this instrument, with one arm placed upon the the anterior aspect of the thigh, and the other upon the anterior aspect of the leg, so as to coincide with the imaginary mesial planes of these segments, I determine the extent of deformity to be 31° right for the right leg, and 22° for the left leg.

By palpation, I find that a point corresponding to the level of the articular surface on the inner aspect of both knee-joints appears to be at a higher level than a point corresponding to the level of the articular surface on the outer aspect of both joints. This in itself suggests an abnormal condition of affairs, as these two points should be on about the same level.

In order to reduce this observation to a numerical form, I will measure from the external malleolus on the outer aspect of the leg to a point on a level with the articular surface on the outer aspect of the knee-joint, and compare it with the measurement from the inner malleolus to a point on a level with the articular surface on the inner aspect of the knee-joint. These measurements for the right leg are respectively $6\frac{3}{4}$ inches and $7\frac{1}{4}$ inches; for the left leg, 7 inches and $7\frac{1}{8}$ inches. It will thus be seen that the distance from the internal malleolus to a point on a level with the articular surface on the inner aspect of the joint, is greater than the corresponding measurement on the outside of the limb by half an inch for the right leg, while for the left leg it is only one-eighth of an inch greater. Now, this condition of affairs is just the reverse of what happens in health,

owing to the fact that the external malleolus projects downward further than the internal malleolus.

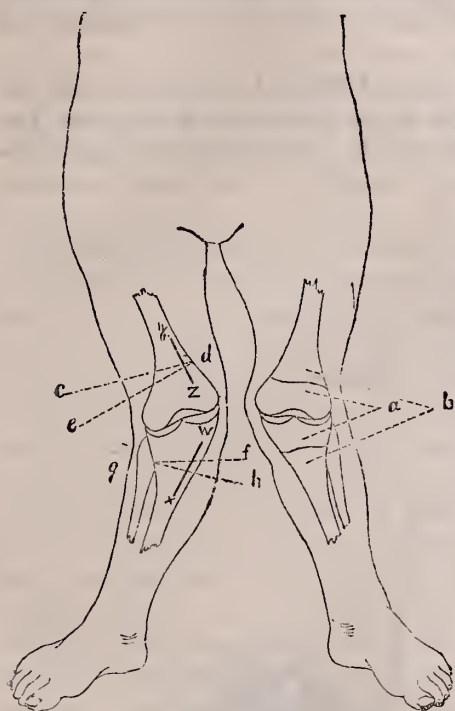


Fig. 7.

ing into the formation of the knee-joint, and involved in the deformity which we propose to correct, it would be as represented in Fig. 7, in which the dotted lines *a* represent the epiphyses of the femur and tibia, and the dotted lines *b* represent the diaphyses of the same bones.

Now, what I propose to do is to remove wedge-shaped pieces of bone from the femur and from the tibia, so as to bring the limb into its proper position. The wedge-shaped piece of bone, which I shall remove from the femur, will have its base directed outward, as indicated by the lines *c*, *d*, *e*; that which I shall remove from the tibia will have its base directed inward, as shown by the dotted lines *f*, *g*, *h*. The result which I hope to obtain by such operative pro-

Before any operative procedure is begun in a given case, the surgeon should make a thorough examination of the limbs to be operated upon, and determine the probable site and character of the deformity. That is to say, he should be able from his examination to form a picture in his mind of the probable contour and anatomical relationship of the bones which lie buried in the soft parts. If I were to draw upon the board a diagrammatic representation of my idea of the form and relationship of the bones enter-

vided rapidly and accurately in any direction, and with as much ease as the soft parts can be divided with a sharp scalpel.

To prepare the limbs for operation, they are first thoroughly washed with soap and water, and afterwards rinsed, first in plain water, and then in carbolized water.

Though with proper care there is no danger of dividing important blood-vessels in operations of this kind, nevertheless, so much oozing takes place when the limb is not rendered bloodless prior to operating, that it interferes very much with the various steps of the operation. It is, therefore, desirable in all instances, to force the blood out of the limb before beginning to operate, and to prevent its return, in order to secure a bloodless operation. To this end, a solid rubber bandage of sufficient length to extend from the toes to the upper part of the thigh, is made use of. It should be first unrolled and dipped in a solution of carbolic acid and water, then rolled up again, and applied to the limb. In applying this bandage, we begin at the toes and pass it around the foot and up the limb, to a point on the thigh as near to the trunk as possible. Here the upper end of the bandage is secured, by passing a rubber tube, well drawn out, about the limb, and tying it tightly, so as to prevent the return of the blood into the limb during the operation. Beginning again at the toes, the elastic bandage is removed, leaving the limb free to operate upon. In order to insure a perfectly bloodless operation, it is necessary to put the elastic bandage under full tension, when it is being applied. There is little danger of making too much pressure—the most frequent mistake being to apply the bandage so loosely that oozing takes place during the operation.

I shall first remove a wedge from the right tibia. In using the electro-osteotome to divide the bones, it makes no difference which side of bone you approach, as with it you can cut out a wedge-shaped segment commencing at the base of the wedge, at the side of the wedge, or at the apex of the wedge. Therefore, in operating you have only to take into consideration the most direct and safest route to the

bone. As the fibula lies on the outer aspect of the tibia and would be in the way of reaching the latter bone from this side, the site selected for the incision is on the inner and anterior aspect of the tibia. As will be seen from the lines *f, g, h*, Fig. 7, the site to select for the removal of the wedge-shaped segment of the bone is as near to the joint as possible, the proximal cut being just below (distad) to the epiphysis. An incision through the soft parts down to the bone is first made, as indicated by the continuous dark line *w, x*. A pair of protecting retractors of the form indicated in Fig. 10

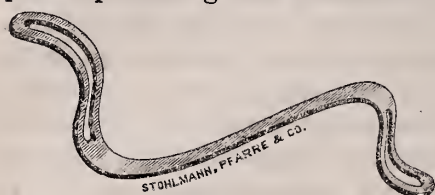


Fig. 10.

is now introduced between the bone and the soft parts. To do this, they are passed, one at a time, around the bone very much after the fashion of placing the

blades of an obstetric forceps in position between the soft parts of the mother and the head of the child. With the retractors in position, the soft parts are crowded back, and the bone brought into prominence. With the electro-osteotome in hand the operator directs an assistant to lower the plates of the battery which supplies the powerful current of electricity necessary to drive the electro-motor. The rapidly revolving blade of the saw, properly inclined, is brought in contact with the bone and quickly divides it. The second cut through the bone necessary for the removal of the wedge-shaped piece is as quickly made as the first, the whole time occupied not exceeding five or eight seconds.

Having removed the segment of bone from the tibia, it is found that there still remains some resistance, which is due to the integrity of the fibula. By manual force it is not usually difficult to overcome this resistance in young children. In operating upon the adolescent and adult, it will be necessary, however, to make a complete section of the fibula. Having fractured the fibula, a carbolized sponge is placed over the site of the external incision, and secured in position by means of an ordinary roller bandage.

We now proceed to the removal of the wedge from the femur. Again referring to our diagram, Fig. 7, it will be seen that we propose to remove a wedge, the base of which shall be directed outward, as shown by the line *c, d, e*. This time, instead of approaching the bone opposite the base of the wedge, we shall approach it opposite the apex; in other words, a linear incision down to the bone will be made on the inner and anterior aspect of the thigh just above the external femoral condyle, as indicated by the continuous dark line *y, z*. Having reached the bone, the protecting retractors are placed in position between it and the soft parts, as already described. With the electro-osteotome, the bone is again quickly divided; but in this instance, as already stated, both cuts are begun at the apex of the wedge instead of at the base as in the former instance. Having removed this segment of bone, there is no further resistance to bringing the limb into position. A carbolized sponge is placed over the site of the external wound, as before, and secured in position with a roller bandage. The elastic girdle at the base of the thigh is now removed and the blood allowed to flow again through the limb.

If the oozing of blood be not profuse the wound may be washed out with carbolized water and at once closed up by means of a continuous absorbable suture. During all manipulations subsequent to the division of the bones, the greatest possible care should be exercised not to mutilate any of the soft parts by permitting the cut ends of the bones to be drawn out of line. It is my practice to hold the limb myself with the cut ends of the bones accurately approximated, while an assistant washes out the wound and closes the external incision by a suture. Nor do I release my hold of the limb even when this much has been accomplished—not until a retentive splint has been applied. Plaster of Paris may be used as a retentive splint. I much prefer, however, the use of gutta-percha. It is far neater to handle, makes a more elegant retentive splint, and is not softened by the discharges of the body should they come in contact with it, as in the case of plaster.

Therefore, while still holding the limb in position with

the divided ends of the bone coaptated to each other, my assistant plunges a strip of gutta-percha into boiling water, and, when thoroughly softened, applies it to the posterior and lateral aspects of the limb, and secures it in position with a roller bandage, tightly applied, extending from the foot to the base of the thigh. As soon as the gutta-percha has cooled and becomes set, the operation on the other limb is proceeded with in the same manner as already described. Having completed the operation and placed the second limb in a gutta-percha splint, the bandage is removed from the first one and the splint trimmed as desired. Particular pains are taken to cut away the splint so as not to cover over the site of the incision through the soft parts. Having cut away the splint in this manner, the limb at the site of operation is sprinkled with iodoform and over it a pad of antiseptic gauze is placed. A permanent roller bandage is now carried over the limb and splint from the tip of the toes to the base of the thigh. With both limbs thus dressed the patient is put in bed and the feet elevated by being placed on a pillow. If all goes well in operations of this kind there is no suppuration, and the dressings may remain in position from four to six weeks without disturbance.

In performing osteotomy operations for the correction of bow-leg deformities, it is often only necessary to operate upon the bones of the leg. Sometimes, however, it is necessary to operate not only upon the proximal ends of the tibia and fibula, but also upon the distal ends of the femur. When the operation is confined to the bones of the leg, simple section of the tibia and fibula just distad to the proximal epiphyses of these bones may be made, and the limb brought into position by gaping the bones apart on their mesial aspect. Placing the limb in a permanent dressing, nature is entrusted with the filling up of this gap by osseous tissue. Less risk of non-union is, however, secured by the removal of wedge-shaped pieces of bone from the tibia and fibula, the bases of such wedges looking towards the outer aspect of the limb. When the bow-leg deformity is very marked, it may become necessary to remove wedge-shaped pieces from the three long bones already

named, in which case the bases of all these wedges look towards the outer aspect of the limb.

In operating upon patients affected with anterior curvature of the tibia, or tibia and fibula, V-shaped pieces of bone are removed at the sight of greatest deformity, the bases of such wedges of bone corresponding to the convex aspect of the shaft.

105 Madison Avenue.

ART. IV.—Treatment Pneumonia. Why not stand by the Old Remedies? By J. LEWIS DORSET, M. D., Dorset, Va.

I wish to premise that I do not attach so much importance to remedies themselves, indispensable as they are, as to the knowledge and skill necessary to their successful employment. It is true as touching all professions that it is not the tools that belong to the trade, but the judgment, knowledge, skill and taste of the workman that give value, beauty, finish and perfection to his work. A physician is better equipped for his responsible work when he is thoroughly acquainted with the therapeutic potentialities of twenty remedial agents than he would be with only a superficial knowledge of two hundred.

If the stomach is very foul, it is good practice to commence treatment with a mild emetic, promoted by a free use of warm water, and clean out the alimentary canal with gently acting scavengers. That distinguished physician, Dr. Nathaniel Chapman, a native Virginian, who was for a long time an eminent teacher in Philadelphia, says: "In my opinion, few propositions are better established than that the feature of malignancy in disease is, under most circumstances, derived from the stomach. We might, indeed, affirm, on sufficient grounds, that such a condition is exclusively owing to the ventricular energies being crippled, that they can no longer sustain the general tone of the system, and hence it sinks into debility, attended by the group of symptoms to which we apply the epithet, *malignant ventricular languido*

omnia languent.” Hence the importance of constantly attending to the condition of the chylopaietic viscera.

In the early stages of pneumonia I generally prescribe a combination of calomel, ipecac and opium, varying the quantities of each according to circumstances, repeating the dose every two, three or four hours, but never pushing the mercury to salivation, nor active purgation. If the fever is high, with a strong pulse, I give quinine in ten grain doses to an adult, if I suspect malarious influence present, if not, of tincture of aconite root frequently repeated, or I use tincture of veratrum viride. My favorite sedative, however, is tartar emetic given in one-eighth grain doses every two hours in some warm tea. I seldom resort to venesection.

Blisters.—In my opinion the most potential and efficient thing in arresting this disease is a fly blister, which acts both as an *attrahent* and *detrahent*. (Just here I think that I can speak with some authority, if success in practice is worth anything, for I do not remember to have lost a case of simple, uncomplicated pneumonia in patients between the ages of six and sixty for the last thirty-six years.) To secure only the best effects of this counteracting agent, the blister should not remain on long enough to inflict a deep wound upon the system, for this tends to aggravate rather than relieve the suffering of the patient. Neither do I approve of the practice of skinning the patient, as practiced by some doctors, which seems to retard a return of the system to a normal state. My theory is that a blister reaches its culminating point in exerting its salutary influence whilst it is drawing.

I find that my views here coincide with those of Dr. Chapman's, who says: “My experience satisfies me that blisters permitted to heal and renewed, are more effectual than when a single one is permanently kept open and discharging.” My aim is to excite the extremities of the arteries to such a degree only as will cause the exhalants to pour out a serous fluid, thereby separating the cuticle from the true skin, and produce only light vesication. Some practitioners ignore blisters in the treatment of this disease, but as well might they deny the power of quinine in intermittent fever. It is demon-

strated by the clearest evidence that an existing morbid action may be removed by inducing a new and different impression near by or even remote from it. Blisters may sometimes be employed as stimulants and exhilarants, to arouse physical torpor and mental lethargy. History informs us that Dunning, a celebrated and eloquent barrister of London, put on a blister whenever he wanted to make the grandest display of his intellectual powers, and found that, while it imparted tone and vigor to his body, it gave at the same time breadth and loftiness to his conceptions. "In estimating the value of blisters, it will be prudent, as a guide in practice, to consider them as stimulants, sometimes acting by inciting morbid action from distant parts, at other times by producing a local impression, which supplants the existing one, and as calculated generally to sustain or revive the strength of the system, with a strong tendency to excite diaphoresis, and by a modification of their stimulant power to tranquilize the system and compose it to rest, under circumstances of excessive morbidity."—(Chapman). I have been myself perfectly composed by a blister when I could not easily lie still five minutes at a time before it drew. A soft, warm poultice, or soft, warm, wet cloths should be applied as soon as the skin is well reddened by the vesicant.

Calomel.—This remedy has a wide range of usefulness, and is, by "proper management, alike capable of exciting and invigorating, or allaying and restraining, the actions of the system." I have felt my own system as *sensibly* invigorated by the action of calomel as by any medicine that I ever took. Professor Chapman says, "There is no article of the materia medica so diffusive in its effects, which, pervading the whole system, enters into every recess, and acting on every part, leaves no morbid impression untouched. It is by virtue of this general and *revolutionary* action that it is calculated to meet such a vast variety of indications. As a mere expectorant, the *modus operandi* of mercury is very intelligible. By powerfully stimulating the excretories, it enables them to throw off the impacted mucus or phlegm which is afterwards coughed up and expelled. It is not, however, merely to such effects that we are to ascribe the

benefits derived from it. Directed with skill, there is something in the union of calomel and opium exceedingly striking in all cases of reduced inflammation, particularly of the lungs." The celebrated Dr. James Johnson, of England, says that "Mercury does more to resolve irritative fever, to equalize the circulation, disgorge the capillary vessels, restore the balance of the nervous power, and open the sluices of the various healthy secretions and excretions, than any other remedy with which I am acquainted." The experienced Bampfield bears testimony to its great value in accomplishing similar results. In regard to its use in consumption, Chapman gives us the following language: "The case in which it is best prescribed is in the incipient stages of consumption, from ill-cured pneumonia or catarrh, and these are by far the most common forms of the complaint among us. Commenced early, a moderate mercurial impression, continued for several weeks, will almost invariably arrest the attack, and, ultimately, eradicate every tendency to the disease in a sound constitution." In tuberculosis it is particularly mischievous, according to the same author. I heard him say that scrofulosis and tuberculosis, so far from being identical, were antagonistic diseases.

Tartar Emetic.—This medicine is cathartic, diaphoretic, diuretic, emetic, expectorant, sedative, and in addition to these properties it seems to possess some specific action in which its febrifuge power is exerted. Balfour, Chapman, Fordyce, and Lanthois coincide in the opinion that it is most efficacious as a febrifuge, when there is the slightest *gastric* disturbance. Both Arnaud and Laennec used it successfully in the treatment of pneumonia.

Opium.—Chapman says, "In all the stages or varieties of pneumonia, where venesection is forbidden, or is an equivocal measure, opium should be employed, uniting with it small portions of antimony or ipecacuanha and calomel."

I have thus employed the language of talented and learned teachers of great experience to convey to the reader a knowledge of the doctrines that I entertain, in order to show that I do not stand alone in my appreciation of the valuable remedies that I have used so long and so successfully. Is

there anything marvelous in being eminently successful when *carefully* and expertly employing medicinal elements of such potent influence?

As an expectorant my preference is the *warm infusion of senega*, which is also a good vehicle for the administration of the tartar emetic. When the system needs supporting treatment the *carbonate of ammonia* and *serpentaria* are favorite remedies. The *diet* in the early stages should be light, consisting of tea and toasted lightbread and butter, rice, arrow root, fresh buttermilk, etc.; later on, essence of chicken, milk-dram, egg-nog, beef peptones, maltine, etc.

The reader will observe that I manifest quite a fondness for old authors. I will admit that I have a strong partiality for old writers, old preachers, old statesmen, old remedies, and *some new* ones that, I think, have come to stay.

Original Translations

From the French. By R. M. SLAUGHTER, M. D., Theological Seminary, Va.

Heat and Cold as Therapeutic Agents. (*Nice Médical.*)

The application of heat or cold to certain parts of the spinal cord, or rather to certain regions of the spine, exercises a special influence upon the cerebral circulation, upon the sympathetic ganglia, and therefrom upon the rest of the body. By *cold* applications the innervation of the cord may be increased, and thereby cause dilatation of the blood-vessels. By the application of *heat*, the medullary innervation is diminished and the blood-vessels consequently contracted. When we wish, therefore, to increase the blood supply of an organ, it is only necessary to apply bladders of ice or cold compresses to that region of the cord from which arise the nerves supplying that organ. If we desire the contrary effect, heat must be applied.

By the application of ice water or ice to the nape of the neck, the pains arising from anæmia of the brain are relieved. By the hot application to the same place, the blood supply of the brain may be lessened. By the application of

cold to the lumbar region, we may triumph over amenorrhœa. Heat applied to the same place will control metrorrhagia.

In acute congestions of the brain, the application of heat to the nucha will act as an antiphlogistic. Pains in the head or the sensation of weight in the upper part of the head, symptomatic of congestion brought about by too long continued or too intense intellectual work, will be promptly relieved by heat.

It is known how useful bathing the head and neck in warm water is in producing sleep, in case of persons whose brains remain too much congested from work or by an habitual irritation of the solar plexus in case of dyspeptics.

In case of convalescents having an insufficient blood supply to the brain, and on that account cerebral inaptitude, and in those cases of nervous troubles, resulting from the same cause in which the brain cannot exercise its modifying power upon the other centres, cold applications increase the afflux of blood to the encephalon, giving more nutrition and greater activity to the brain.

In the stage of invasion of meningitis, warmth should be applied; in the period of paralysis cold should be preferred. Hot compresses about the neck are of very great advantage in sore-throats and inflammatory laryngitis. By weakening the central innervation they are very efficacious against spasms of the throat and other parts. Very hot fomentations over the right hypochondriac region act a good part in relieving painful congestions of the liver and the numerous complications, the result of mechanical, reflex and trophic troubles caused by the congestion. Damp envelopment of the thorax, in acute affections of the lungs, when carried out in conformity with the principles of rational hydrotherapy, produce similar effects to those of hot applications. —(*Rev. de Therap. Méd. Chir.*) See *Praticien*, Jan. 3, 1887.

Instantaneous Cure of Whooping Cough, by Sulphur Fumigations.

An article having this heading has been lately published by Dr. Mohn a Norwegian physician, (*Norsk Magazine for Lægevidenskaben*), which seems to show the parasitic origin of the group of symptoms called whooping cough. Six years ago, says Dr. Mohn, my oldest boy, 3 years old, had scarlatina and whooping cough, commencing eight days after the scarlatinous eruption, which was slight. At the end of six weeks, or five weeks after the beginning of the cough, there was a disinfection of the room and its contents by means of fumi-

gations with sulphur. This resulted in the boy's being immediately cured, and a sister, who was a little older, was also relieved of an attack of cough following a whooping cough.

Four years later, a three-year-old daughter had a very severe attack of whooping cough. Three other children had at the same time, slight cases. Bronchitis and epistaxis had so weakened the little girl that her recovery seemed very doubtful. Various internal remedies were tried, as were also inhalations of chloroform and phenic acid, but without result. The doctor then remembered how the sulphur fumigations had before caused the disease to disappear, and again burned sulphur. During the following night the child had two slight attacks of coughing, and by the next day, it had entirely gone. The other children were also cured. Dr. Mohn cites several other cases, one an infant of one month old, which were cured in the same way.

The children are dressed and taken from the room in the morning. Then the bedding, clothes and playing-things which cannot be washed, are hung about the bed-room and room in which the children passed their time, and in these rooms are burned twenty-five grammes of sulphur for each cubic metre in the rooms. The gas is left to take its effect for five hours and then everything is well aired. That night the children sleep in the completely disinfected beds and rooms, and are cured of their whooping cough. *Le Praticien*, Dec. 20, 1886.

(The above method of treatment is certainly very simple and easy to try. I shall give it a trial on the first opportunity, but have great doubts that it will accomplish the above claimed results.—R. M. S.)

Oxydation in the Treatment of Pyrexia and Especially Typhoid Fever.

M. Albert Robin made to the Société Médicale des Hospitaux, the following communication as to the results of his researches on this subject.

The therapeutics of typhoid fever should rest upon the three following principles which govern the chemical statics of this disease.

1. Diminution of oxydation, which oxydation gives birth to soluble products that are toxic only in large quantities and easily eliminable.

2. Increase the act of hydration and breaking up, which give rise to but little soluble products that are generally toxic and eliminated with difficulty; hence their frequent retention in the system.

3. Increase in the total disintegration within the system.

Contrary to the prevalent opinion among medical men, the opinion on which is founded the antipyretic method of treatment, M. Robin does not believe that oxydation is the only source of animal heat. The acts of hydration and breaking up, which play an important part in febrile disintegration, are also generators of heat, and the febrile calorification results from both of these re-actions. Now, in typhoid fever, oxydation is much diminished, inasmuch as the co-efficient of oxydation is lowered; the proportion of urea is in inverse proportion to the gravity of the disease; the absorption of oxygen does not increase in proportion to the amount of combustible material set free, and the excretion of carbonic acid exceeds but little that of good health. These facts completely destroy the foundation upon which the antipyretic method is supported, and on the contrary, lead to the two following indications:

A. Strike out from the treatment of typhoid fever all methods and remedies that retard oxydation. Examine from this point of view all the antipyretics in use. Example.—Sulphate of quinine in small doses shows disintegration without diminishing oxydation, while in large doses it lessens both oxydation and the absorption of oxygen. It is therefore important that it should be given only in small or divided doses. Antipyrine and analogous agents diminish the co-efficient of oxydation and augment the amount of uric acid and potash. For this best of reasons their use should be proscribed.

B. Favor organic oxydation :

1. By keeping in the air oxygen in suitable quantity and tension (ventilation, low temperature, diffusion of oxygen.)

2. By preventing pulmonary stasis which is an obstacle to hæmatosis.

3. By stimulating the nervous system which exercises a direct influence on oxydation, (cold baths which increase the co-efficient of oxydation.)

4. By selecting only those remedies whose actions are thought to increase oxydation.

None of the very oxygenized agents that M. Robin has studied, the chlorates, bromates and iodates, undergo a sufficiently complete reduction to be used with advantage. It is necessary to look to those means which favor the absorption of oxygen. The revision of remedies from this point of view is in process of execution. M. Robin indicates at present alcohol in small doses and abundant drinks, which

increase the co-efficient of oxydation.—*Le Practicien*, Dec. 20, 1886.

New Methods for Closing Perforations of the Membrana Tympani.

Dr. Baratoux (in *Le Progrès Médical*, January 1, 1887,) says that the various substances which have until lately been used to close perforations of the membrana tympani, such as small bits of India rubber, balls of cotton, etc., are nothing less than foreign bodies and have the inconvenience of causing more or less irritation. In 1878, Dr. Berthold, of Koenigsberg, wishing to substitute a living membrane for the foreign body, tried the grafting of skin from the arm over perforations. The skin had the inconvenience of being too thick and was with difficulty adapted to the edges of the perforation. Then abandoning this, he replaced it with the testaceous membrane of the hen's egg. The fibrous tissue of this envelope contains blood vessels (Meckel), and resists the action of putrefaction (Wittich); and besides, this pedicle adheres strongly by its internal surface to dry objects.

To apply this membrane, it is necessary that any otorrhœa and the cause giving rise to it be removed. A piece of the testaceous membrane a little larger than the opening to be closed is cut out, and stuck upon the end of a small glass tube with a little of the white of the egg. This is easily done if care is taken to first press lightly a rubber tube fitted on the other end of the pipette. On removing this pressure the piece of membrane sticks to the orifice of the tube. The tube is then introduced into the auditory canal up to the tympanum, and by pressing upon the rubber, the integral surface of the pelicle is fitted upon the edges of perforation. If, by chance, it is not exactly fitted where wished, it should be carefully slipped into position by the use of a probe. If after the closing of the perforation, a secretion is again formed in the middle ear, the membrane must be removed, the discharge dried up, and the opening closed with a new pelicle. This operation succeeds well only when the membrane from a perfectly fresh egg is used.

It once occurred to us that we might use for the same purpose the skin of the frog. Some months since, Dr. Dubousquet, having related to us the success he met with in the use of the skin of this animal in a case of extensive burn, which case he has just communicated to the Society of Biology, we applied to different perforations, small pieces of skin taken from the interdigital

membrane, the skin of the feet, or the blinking membrane of the eye of the frog. Our trials succeeded perfectly, and the results seemed even more favorable than those given by the testaceous membrane of the egg. The mode of application is analogous after the careful dissecting off of the skin with scissors and needles.

We have also utilized the testaceous membrane of the egg, and the blinking membrane of the frog to repair alterations in the nasal mucous membrane in certain forms of rhinitis. We shall have more to say upon this last subject.

The Antagonism between Strychnia and Cocaine.

Dr. Bignon gives in the *Bulletin Général de Therapeutique* the following results of his numerous experiments among dogs.

1. Cocaine is a physiological antagonist to strychnine.
2. A dog which has ingested as much as two milligrammes of strychnine per kilogramme of bodily weight, can always be saved by hypodermic injections of cocaine.
3. This experiment succeeds soon after the first tetanic paroxysm has set in.
4. When the dose of strychnine is as large as three milligrammes per kilogramme of weight, the dog dies from the amount of cocaine required to counteract the effects of the strychnia. *Le Praticien*, Dec. 20, 1886.

Cases of Rabies after Pasteurism.

Le Progrès Médical, of December 25th, 1886, contains the following report of cases of rabies:

Le Patriote de Bruxelles, says: "A game keeper in the department of Sarthe, was bitten by a dog two months and a half ago. The dog was killed and an autopsy made, which showed that he was not mad. Nevertheless, to dispel all doubt, the man was sent to Paris to be treated by M. Pasteur. It was thought necessary to make three inoculations. Soon after his return home, the unfortunate man was seized with constriction of the throat, hydrophobia and all the symptoms of rabies, and died in horrible suffering. It may well be asked, was the dog mad, or was it the inoculation which caused the disease, the bites not having been virulent, and would he have had the disease, had he not been inoculated?"

An individual, aged 27, who had been bitten by a dog on the 7th of August, consulted Pasteur on the 11th, and sub-

mitted to daily inoculations for twenty-three days. In spite of this the rabies manifested itself on the 14th of October, and the person died on the 17th. (*Il Morgagni*, 4 Dec. 1886.)

(We give these cases because it is indispensable that medical men should know all that is said, and especially by foreigners, upon the treatment of rabies by the method of Pasteur.—TRANSLATOR.)

Analyses, Selections, etc.

Doses and Uses of Some New Remedies.

The *American Medical Journal*, March, 1887, gives the following synoptical review of the effects or uses of some of the newer remedies:

Adonidin.—The amorphous bitter principle of *adonis vernalis*, slightly soluble in ether and water but much more so in alcohol. Its effects are marked in increasing the amount of urine. It diminishes the heart beats and increases its strength. It rapidly raises vascular tension, the heart's action becoming stronger and more regular under its influence. It has no special action on nervous troubles of the heart. It has been used in cases where digitalis is indicated, and is said to be less dangerous. The dose is from five to eight grains.

Antifebrin.—Is a white crystalline powder possessing neither basic or acid properties and non-poisonous. It is odorless and colorless; insoluble in cold water, slightly soluble in boiling water, freely soluble in ether and alcohol, and possesses antipyretic properties. It is destined to supersede antipyrin and thallin. The dose is from four to sixteen grains.

Cannabin Tannate.—This glucoside, combined with tannic acid, was introduced by Merck. It acts as a pleasant hypnotic, and is used in cases where morphia is objectionable. The dose is one centigramme.

Cantharidin.—The active principle of Spanish flies, possesses all the properties of the insect in a most powerful degree. Because of its prompt action it is often preferred, as the flies are often uncertain in their effects. Dietrich estimates that one gramme of cantharidin is equal to two hundred grammes of cantharides.

Coniin Hydrobromate.—Coniin, from *conium maculatum*. It has been used in a variety of diseases. It is now used in spasmodic affections. The crystallizable salts—the hydrobromate—is a substitute for pure conium on account of its easier administration and uniform composition. Dose, 1-12th grain.

Convularin and Convallamarin.—Two glucosides from the lily of the valley. Convularin acts as a purgative. Convallamarin resembles digitalin in its action on the heart, but in certain doses acts as an emetic. Dose, 1-100th grain.

Gelsemin.—A powerful alkaloid from *gelsemium sempervirens*, employed in intermittents, typhoid, and yellow fever; also in convulsions and hyperæmias of the head, eyes and face, and in inflammatory conditions generally. Dose, 1-200th of a grain.

Hyoscin.—Dose, 1-200th to 1-48th grain. Professor Landenburg has isolated from the *hyoscyamus niger* another alkaloid, which he has termed hyoscin. Its presence has long been suspected, owing to the difference in the physiological action between the crystallized and amorphous hyosciamin. Hyoscin is now used for the same purpose as atropia, but its action is more prompt and energetic, and the dose required proportionately smaller. It dilates the pupil of the eye in the same manner as atropia, but the results are more satisfactory. Merck recommends one-half per cent. solution for external application. Doctor Horatio Wood, after an elaborate series of experiments, physiologically and therapeutically, with this drug, recommends it very highly as a soporific in cases of intense nervous excitement and excessive cerebral action. In insane patients a 1-48th of grain always insures sleep. The same physician also recommends it in spermatorrhœa, giving a 1-75th grain every night. The hydrobromate is usually the form recommended.

Papayotin and Succus Papaya.—Succus papaya, concentrated juice from green fruit of *carica papaya*; soluble in water in proportion of one part to eight parts water. It is used undiluted as a solvent for croup membranes. Applied with a camel hair pencil every ten minutes, until every particle of the membrane is deposited and capable of being removed. Papayotin, the active principle of succus carica papaya, is also used in croup and diphtheria. Being more concentrated, its action is more prompt and certain, requiring but twenty-four hours to dissolve croup membranes. A five per cent. solution is employed. Dr. W. Keating Bauduy has used a five per cent. solution in several cases of diph-

theria, and has succeeded in dissolving the membranes in from six to eight hours.

Pilocarpin.—From jaborandi proper; the muriate most extensively used. A reliable diaphoretic, and used hypodermically in doses one-quarter grain; contracts the pupil and is an antidote for atropine poisoning, giving one-half grain, hypodermically, every fifteen minutes until five grains have been given. Under influence of an acid, changes to jaborin, which resembles atropine in physiological action.

Scoparin and Spartein.—From broom tops. Scoparin in stellate crystals. Used as a diuretic in doses of three centigrammes, hypodermically. Spartein is a narcotic alkaloid, used as a substitute for digitalin in cardiac affections. It is also regarded as a diuretic. Given in doses of four centigrammes.

Terebene.—A remedy for cough, in doses of five drops. It is also used successfully as an antiseptic.

Terpin Hydrate.—Is used as an expectorant, in doses from five to ten centigrammes. In doses from twenty to forty centigrammes it acts as a decided diuretic.

Significance of Certain Signs and Symptoms.

The *Massachusetts Medical Journal*, of March, 1887, like too many other journals of the day, excerpts an article of merit from the *Pacific Record*, without naming the date of issue or the author. Such conduct borders on the field of plagiarism, and should meet with nothing short of condemnation by reputable journals. The article escaped us in examining our exchanges, and we are left in the dark as to where to find the article and to locate the author. The author says:

“Swelling under the eyes, greyish, white or waxy color of skin, denotes *granular disease of kidneys*.

Swelling of the labia, on one or both sides, will accompany *inflammation of kidney*.

Carbuncles on the shoulders, or scapula region, are frequently accompaniments of *diabetes*.

Pain, referred to the meatus urinarius, is sure to be the result of *cystitis, prostatitis or nephritis*.

Pruritus of the anus will be the evidence, often, of disease of the *prostate*.

Pain or numbness in the outer part of the thigh denotes some disturbance of the *sexual organs*, in both male and female. Sciatic neuralgia often depends, in females, on inflammation of the ovary. In men, irritation of lumbar or sacral nerves.

Pain in the heels, in females, may be the only evidence of *ovarian abscess*, while pain and swelling in the *mammæ* will evince some trouble in the same side of *uterus*, or *fallopian tube*.

That shortness of breath, or asthmatic breathing, may indicate *valvular disease*, or *aneurism of the aorta*, is probably as well known as that discoloration of the skin may be due to *corrosion* of the liver, or to disease of the *suprarenal capsule*. *Addison's Disease*: Sharp outlines of the facial muscles, a peculiar, querulous look, surely define a dyspeptic, and is not to be mistaken even as an expression of a temporary pain.

A dull, aching pain in the right shoulder will arise from congestion in the right lobe of the liver, while disturbance in the *left lobe*, as well as a *gastric ulcer*, will give ache or pain in the left.

Some *heart diseases*, notably dilatation of the left ventricle, will give pain in the coracoid process, radiating into the left arm; but this pain will stop at a point half way to the elbow.

Swollen feet should warn us of some organic disease of *heart*, *kidney* or *liver*.

Hot feet and hands accompany dyspepsia, while a red nose will be an indication of *gastric irritation*, either from indigestion or whiskey.

But the appearance of the hands is by far the best evidence we possess for instantaneous diagnosis. Not always to be depended on, it is true, as an entity, but corroborated by other symptoms, will hardly fail.

Dr. Watson first noticed a club-shaped form of the ends of the second and third digits as pathognomic of *tuberculosis*.

Finger-nails white at the points and purple at the base always accompany the chills of *malarial fever*. A white appearance of the fingers in contrast with the back of the hand, will denote a very *torpid condition of the bowels*. A yellow tinge in the palm or under the finger-nails, produced by pressure, will indicate *torpidity of liver*.

We must notice the peculiarities of cough that are the consequences of irritation of the different branches of the pneumo-gastric. The short, quick jerk of the cardiac irritation; the dull, heavy bark of bronchial dryness; the wheezy, asthmatic sibilation of bronchial constriction, stand in opposition to the full, sonorous rale of tuberculosis, or the tiresome effort of hepatic congestion, or of gastric disturbance. These different modifications of sound, though

they all arise from a common centre, the pharyngeal, yet convey to the educated ear the history of their origin. No one can mistake the sound of whooping-cough, and a "stomach cough" is proverbial.

Maltine as a Food-Solvent.

Dr. J. Milner Fothergill, Senior Assist. Phys. to the Victoria Park Chest Hosp., London, Eng., etc., referring to the use of maltine in his treatment of indigestion, says:

"Then, again, in order to aid the defective action upon starch by the natural diastase being deficient in quantity or impaired in power, we add the artificial diastase, maltine. But, as Dr. Roberts points out, in order to make this ferment operative, it must not be taken after a meal is over. Rather it should be added to the various forms of milk porridge or puddings before they are taken into the mouth. About this there exists no difficulty. Maltine is a molasses-like matter and mixes readily with the milk, gruel, etc., without interfering either with its attractiveness of appearance, or its toothsome-ness; indeed, its sweet taste renders the gruel, etc., more palatable. A minute or two before the milky mess is placed before the child or invalid, the maltine should be added. If a certain portion of baked flour, no matter in what concrete form, were added to plain milk, and some maltine mixed with it before it is placed on the nursery table, we should hear much less of infantile indigestion and malnutrition."

Again, the same eminent authority, in Fothergill & Wood's "Food for the Invalid," says: "The action of the saliva upon starch is to quickly convert it into sugar. Consequently, as sugar is soluble, this leaves the nitrogenized portion of the flour to be readily acted upon in the stomach. When the saliva is defective in an infant, or at least insufficient to produce the conversion of starch into sugar, it is now customary to give the infant maltine. Maltine is a sweet, molasses-like sort of thing, which can be added to baby's food a brief period before it has to be taken, for the conversion is quick. The starch being thus largely converted into sugar, the digestive act in the stomach goes on without painful effort. The treatment of dyspepsia in adults is carried out on precisely the same principle, and baby's food and Maltine are equally good for them."

Lactated Food in Diabetes Mellitus.

The following case, reported by a Dean of one of the most

prominent Medical Colleges of this country, will well illustrate the usefulness of lactated food when applied to the treatment of this disease in its most aggravated form. A man 22 years of age had been suffering from headache, prostration, intense thirst and a voracious appetite, for several months. Upon examination, in March last, he had all the above symptoms; had become too feeble to walk and was practically confined to the bed. He was voiding twelve quarts of urine in twenty-four hours, which upon analysis showed a specific gravity of 1036—four grains of sugar to the ounce. His thirst was intolerable, his appetite unnatural, craving starchy and saccharine food; was unable to sleep and obstinate constipation existed for several weeks. He was put upon lactated food and skimmed milk; allowed to drink all he wanted of these, but denied water or any other article of food. In forty-eight hours the quantity of water voided, was reduced to three quarts. In one week his food and drink consisted wholly of lactated food, and the general improvement in his symptoms was most marked. He continued on this diet for two months, and so far as I could determine all the prominent symptoms of diabetes had disappeared. He was voiding but one quart of urine in twenty-four hours, sp. gr. 1016, bowels regular, could sleep without anodynes, had gained in strength, and was walking about. At this time, six months after adopting this plan of treatment, he is at work, has no apparent symptoms of the disease, and is allowed to take a mixed diet, simply avoiding starches and sugars.

Book Notices.

Medical and Surgical Memoirs: Containing Investigations on the Geographical Distinctions, Causes, Nature, Relations and Treatment of Various Diseases—1855-1886. By JOSEPH JONES, M. D., Professor of Chemistry and Clinical Medicine, Medical Department of Tulane University of Louisiana; Visiting Physician of Charity Hospital; Honorary Fellow of the Medical Society of Virginia, etc. VOLUME II. New Orleans, La.: Joseph Jones, M. D., 156 Washington Avenue. 1887. (All Rights Reserved). 8vo. Pp. xxii.—1348. Heavy Cloth; Leather corners and back. Price, \$6.50. Sold only by subscription. (From Author).

The title of this work, in some measure only, tells its value. We have not in this country a closer observer or a more ac-

curate recorder of facts than the author of this volume. If there be a criticism to be passed upon his *Memoirs*, it is not that what he records is not valuable and reliable information, but that the profusion of facts adduced to sustain a point he asserts to be true is in itself surfeiting. His summaries, however, are concisely stated, so that he who does not wish to go through all of the detailed steps which have led up to well founded conclusions, may, for the most part, accept the various *resumés* as definite, well established deductions.

It would be impossible, in the brief space allotted to us to even attempt a review of the book. Our readers must be content with the statement that for the medical *student*—especially of diseases incident to the Southern and Southwestern States and to warm climates in general—he can afford almost as well to be without these *Memoirs* as he can without his medical dictionary. Even the “table of contents” covers some fourteen pages of closely printed matter, and thus we are prevented even from reprinting that. But the general title of this volume is on “*Fevers*,” and as might be expected, every phase of the malarial fevers is fully discussed. About 125 pages are devoted to hæmorrhagic malarial fevers alone. On this subject, the exhaustive paper by Dr. Otis F. Manson, of Richmond, Va. (in *Trans. Med. Soc. Va.*, 1886), might be quoted as showing that malarial hæmaturia, while a new disease, antedates 1866 as to the year of its first recognition as a separate and distinct disease.

We might comment upon the apparent lack of system adopted by the author in the beginning pages of this volume. He there records some valuable facts which will be lost sight of unless special attention be directed to them. For instance, a valuable section on “Sun-stroke” occurs apparently disjointedly on page 13; sections on the treatment of rheumatism, of syphilis, etc., occur on pages 25–29; an exceedingly important section on treatment of “acute arsenical poisoning” by milk is irrelevantly placed as to the main topics of the work on page 39, etc. A very useful chapter to our country doctors especially is the one on “Indigenous Remedies of the United States of America which may be Employed in the Treatment of the Various Forms of Malarial Fever, as Substitutes for the Sulphate of Quinia.” The disease known as “Yaws,” as well as Leprosy, receive the consideration of full length sections. The volume abounds in many strikingly instructive practical records that merely relate to Fevers, and that could scarcely have been expected in a systematic work with a different title than *Memoirs*.

Dr. Jones, in the absence of a suitable publishing-house in New Orleans, has published this work himself. His want of experience as a *publisher* is shown by the low selling price he places upon it—only \$6.50. A regular publishing house of established reputation would not have charged less than \$10 for such a publication. The volume is profusely illustrated by original drawings and chromo-lithographs. We trust our friends everywhere will reasonably appreciate the labors and value of work done by Dr. Jones by promptly sending him their subscriptions, as the work is sold only by subscription.

Wear and Tear, or Hints to the Overworked. By S. WEIR MITCHELL, M. D., LL. M., President of College of Physicians of Philadelphia, etc. Fifth Edition. Thoroughly Revised. Philadelphia, Pa.: J. B. Lippincott Company. 1887. Cloth. 12mo. Pp. 76. Price, \$1.00. (For sale by Messrs. West, Johnston & Co., Richmond.)

This essay is one full of value to physician and patient. It is brief enough to be read easily at one sitting; it is the old story told over again in a most pleasing and entertaining manner; it is earnest and full of truth, and it impresses the mind with wonder that what is here said and felt to be true by so many with overtaxed brain and nervous force, does not bring about reform in systems of education, modes of living and plans for the future. We could not give this book a higher endorsement than to express the conscientious wish that *all* of our educated and business friends, as well as those whose idea of social enjoyment is nothing short of protracted dissipation would take time enough to read its pages with the same measure of attention that they give to many subjects of far less real importance to their health and happiness.

Clinical Manual of the Diseases of the Ear. By LAURENCE TURNBULL, M. D., Ph. G., Aural Surgeon to Jefferson Medical College Hospital, etc. With a Colored Lithographic Plate, and Numerous Illustrations on Wood. Second Revised Edition. Philadelphia: J. B. Lippincott & Co. 1887. Cloth. 8vo. Pp. 567. (For sale by West, Johnston & Co., Richmond.)

The book before us is an exact reprint, word for word, of the edition of 1871, as far as page 436, where the additions to the former edition begin by an essay, on *deaf mutism*, of 13 pages. Then comes a chapter headed "*Causes of Ear Diseases*," under which is included "Diagnosis of Ear Dis-

eases," "Aural Therapeutics," "Antiseptics in Ear Disease," and "Prognosis in Ear Disease." Whilst new ideas, remedies and methods of treatment that have been brought forward since the first edition was published, are discussed in this chapter, its contents are hardly in accord with its heading. The same objection applies equally to the next chapter, entitled "Desquamative Inflammation of the Ear," which goes on to treat not only of this subject, but also of the *contraction* of the external meatus, *bony exostosis*, and the uses and application of the *artificial drum head*. So of the next, headed "Syphilis and Mumps Causing Disease of the Internal Ear, etc.," but it includes also "Surgical Opening of the Mastoid," intermittent otitis (which really belongs to the middle ear), and deafness from quinine. Then comes an appendix—with an article on *cocaine*; treatment of purulent inflammation of the middle ear with peroxide of hydrogen and bromic acid; Sexton's operation; diphtheritic deafness; winding up with the means of illuminating the nose, throat and ear.

It will be seen from this that whilst the subject matter of the new part of the work is a really valuable addition to it, it could hardly have a worse arrangement. Any student or physician looking under the regular headings for a subject would read it under the impression he was getting the latest ideas in aural surgery, without any reference to the new matter at the end of the volume. To have made the work, what it should be, as a clinical text-book, each part should have been reviewed and all new material incorporated under its proper heading, thereby making each chapter or division a full exposition of the present aspect of the subject. One advantage, however, is that one may refer to the new parts of the work without looking through the whole book. This probably was Dr. Turnbull's motive in such an arrangement, and his name has been so long connected with otological literature, that anything from his pen is a welcome addition to a medical library.

J. A. W.

Lecons sur les Maladies du Systeme Nerveux, Faites a la Salpetriere. Par J. M. CHARCOT, Professeur a la Faculté de médecine de Paris, etc. Tome Troisième (deuxième fascicule). Paris. A Delahaye et E. Lecrosnier, Libraires. Editeurs. 1887. Paper. 8vo. Page 390. (From Publishers).

We do not recall that we have ever before received simply the last part of a book for notice. The work before us begins with page 129 (second fasciculus of Volume III.)

When we get a book in this way we feel much as we imagine a person would feel who saunters on the street with his coat on and his pantaloons off—something important is wanting.

In comparing what is before us of the present edition of Charcot's *Lectures on the Diseases of the Nervous System* with the edition of 1879, we find that they are totally different books—that different subjects are treated of, and the same subjects in different manner; so that one would not recognize one book by a knowledge of the other. It is evident, however, that the present edition is much enlarged, and covers a wider range of subjects. In his clinical descriptions, there is no author that excels Prof. Charcot. While there are some differences in the manifestations of some of the neurotic diseases as seen in France and this country—notably hystero-epilepsy—so graphic are the descriptions given by Charcot of the clinical characters of all the diseases which form subjects for his lectures that the merest tyro who reads his works could scarcely fail to recognize on sight the diseases he describes. Much of the work under notice is taken up with hysterical manifestations, and the section on hysterical joints, etc., is specially instructive. In therapeutics, Charcot might be a little more profuse for the gratification of his general readers, but he could scarcely be improved upon as to the soundness of his doctrine or as to the perfection of results.

A Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. Illustrated by Chromo-Lithographs and Fine Wood-Engravings. Edited by ALBERT H. BUCK, M. D., New York City. Volume IV. Bound in cloth, sheep, and half morocco. Prices, \$6.00, \$7.00 and \$8.00 per volume. New York. William Wood & Company. (From Publishers).

The special value of this "Reference Handbook" to every practitioner is a fact no one will deny. The subjects considered are arranged alphabetically. Each article is quite a complete essay in itself; indeed, in some instances, the articles may be considered exhaustive in character. The Handbook treats of materia medica and therapeutic articles, as well as hygienic. Matters of practical chemistry, anatomy, physiology, etc., are subjects of as much consideration as are questions in surgery, obstetrics, practice, etc. In great part, it will well serve the part of a text-book on each of these departments—each disease or condition being syste-

matically treated of under the usual headings of definition, pathology, symptoms, etiology, diagnosis, treatment, etc. As to the authors, a few of them are unknown to medical fame, unless perhaps in their immediate communities, but they bring themselves out favorably in their present writings. A like remark was applicable to many of the authors in Ziemssen's *Cyclopædia*. Geographically, of the ninety-five authors, only three are selected from States South and Southwest of District of Columbia—namely, one each from Tennessee, Georgia and Louisiana. It is a mistaken policy to make such a work as this *Cyclopædia*, have the appearance of being so sectional as to authorship. The present volume (IV.) treats of all subjects that can be alphabetically arranged between the words, *Ichthyol* and *Milford Springs*. This *Reference Handbook* is to be completed in two more volumes.

Nervous Diseases and Their Diagnoses. By H. C. WOOD, M. D., LL. D., Member of the National Academy of Science. Philadelphia: J. B. Lippincott Company. 1887. 8vo. Pp. 501. Cloth. Price, \$4. (For sale by West, Johnston & Co., Richmond).

This is distinctively, as the author himself styles it, "A treatise upon the phenomena produced by diseases of the nervous system, with especial reference to the recognition of their causes." We ought not perhaps to offer any complaint against a work that does excellently well what it claims to do. This book does this much. But we regret that it does not seek to do more. It is invaluable as a work on diagnosis, but cannot fill the want of the general practitioner in that it does not attempt to offer any therapeutic advice. This treatise describes graphically the distinguishing or characteristic signs and symptoms of the various morbid conditions it essays to discuss, and traces out well the bearing of these signs or symptoms to the causative pathological states. The scientific practitioner cannot well afford to be without it, while it is an essential to the student who is studying medicine *scientifically*. We trust that our author, if called upon for a second edition, will favorably consider the suggestion to add sections on therapeutics under the appropriate headings. We do not ask for sections on therapeutics as full in detail as are the descriptions of the conditions; but the general practitioner who cannot buy many books wants to have at least suggestive consultations with his authorities, so as to satisfy himself that he is prescribing in accordance with the advanced views of the day.

The Laws of Generation, Sexuality and Conception. [By H. M. GOURRIER, M. D., Member de la Faculté de Paris, etc. Translated and Edited, with an Introduction and Notes by FRANKLIN DUANE PIERCE, M. D., Superintendent Union Springs, N. Y., Sanitarium. Hygeia Publishing Co., Union Springs, N. Y. 1886. 12mo. Pp. 94. Cloth. Price \$1.

The theory of the author, as to the question of determination of sex at the time of intercourse, is that the sex of the offspring is that of the parent possessing the best health or vitality. In short, if the husband be the picture of health and vigor, and the wife a weakly developed, sickly woman, the sex of the offspring will be female. In the casual glance at persons in this community as we know them, there are too many exceptions to this statement to prove the rule. After devoting a good deal of attention to the theories as to the determining cause of sex in the human subject, the result of our studies remind us of a good old physician that was our attendant when a child. When asked by an inquisitive lady some such question as "Doctor, what is the original cause of small-pox?" he replied, "God A'mighty knows, madam; I don't."

Text-Book of Medicine. By ADOLPH STRUMPELL, formerly Professor and Director of the Medical Polyclinic, University of Leipsic. *Translated by permission from the Second and Third German Editions.* By HERMAN F. VICKERY, A. B., M. D., Physician to the Out-Patients, Massachusetts General Hospital, etc., and PHILIP COOMBS KNAPP, A. M., M. D., Physician to Out-Patients with Diseases of Nervous System, Boston City Hospital, etc. *With Editorial Notes by* FREDERICK C. SHATTUCK, A. M., M. D., Visiting Physician to Massachusetts General Hospital, etc. With 111 Illustrations. New York: D. Appleton & Co. 1887. Large 8vo. Pp. 981-xx. Cloth. Price \$6. (For sale by West, Johnston & Co., Richmond.)

Such have been the additions to medical literature and information of late years that it would hardly seem possible to make a satisfactory one-volume text-book of medical practice. Yet the work now brought to the attention of our readers so nearly "fills the bill" that it gives us pleasure to specially recommend it. It is a very complete work, and thoroughly practical in all its details. It is therefore an excellent work for the general practitioner. What the author omits, the translators of the American edition supply, and thus adapt it to the wants of American physicians. This is the first appearance of the work in English. The first German edition was issued in 1883; the second was in 1885.

Its popularity in that tongue is manifest from the fact that a third edition was demanded in 1886. We predict that in a year or two "Strümpell's Practice" will be a standard authority with the American physician. The work gives a good clinical description of the diseases, and in therapeutic advice it is practical, fully up to the latest standard of continental advances, and oftentimes gives new and plausible suggestions. The American editors' notes add what is essential as to American practice.

Epitome of the Newer Materia Medica. Designed for the Special Convenience of the Busy Physician. Fourth Edition. Revised and Enlarged. 1886. Parke, Davis & Co., Detroit, Mich. 8vo. Pp. 76.

This book may be classed as among the several "advertisement books" now being published by different firms; but unlike many of them, this one is of real value in the library of every general practitioner, to tell him of the "new remedies" being introduced. With a generosity that we do not know is equalled, we are authorized to state that a paper-bound copy of this *Epitome* will be mailed, *without charge*, to any of our subscribers who may apply by letter to Messrs. Parke, Davis & Co., of Detroit, Mich., for it. The book gives the names of the drugs, their synonyms, preparations, and doses, and medical properties. Much information is given in the publication that is in advance of the text-books. It is compiled from the journals, personal correspondence, original investigations, etc.

Scott & Bowne,

Manufacturing Chemists of New York, make a specialty of producing an emulsion of cod-liver oil with hypophosphites. Their great care in selecting the oil and in making the combination is amply proven by the high therapeutical value set upon the emulsion by the profession. It is no new remedy, but has been steadily growing in demand for a number of years. It is certainly very useful in restoring wasting tissue, and in cases of scrofulous children it acts almost as a specific. They also offer a Buckthorn Cordial, which is highly useful in the treatment of constipation.—*Massachusetts Eclectic Medical Journal*.

VIRGINIA MEDICAL MONTHLY,

[ESTABLISHED APRIL, 1874.]

RICHMOND, VA.

SUBSCRIPTION, \$3.00 per annum.....SINGLE COPIES, 30 cents.

LONDON B. EDWARDS, M. D.....EDITOR AND PROPRIETOR.

Original Contributions solicited from all sections; but the Editor does not hold himself responsible for the views of authors.

Articles contributed to the pages of this Journal must not be duplicated in other journals by the author without proper credit being given to the Virginia Medical Monthly.

Clinical reports, notes of interesting practical cases, proceedings of societies, etc., are invited from the profession generally. Lengthy theoretical articles not received without author's consent for condensation by the Editor. Rejected articles held one month at disposal of writer.

Editorial.

Virginia State General Hospital.

Governor Lee has called the General Assembly of Virginia in extra session on the 16th of this month. A better opportunity could scarcely be presented to the Committee of the Medical Society of Virginia having in charge the duty of urging the subject of establishing a *State General Hospital* upon the attention of the Legislature. It is only a few months ago that the Medical Society of Virginia, which voices the opinion of the profession of Virginia, with perfect unanimity, declared its belief that "the establishment of such a hospital would be of very great benefit to the suffering poor in Virginia;" and this fact ought to stimulate each member of the Society to urge upon his Senator and representative the importance of the measure. As we construe the action of the Society, it is the majority wish that the proposed hospital shall be under the control of an independent Board of Directors or Managers, entirely separate and distinct from every other college or eleemosynary institution in the State. It would be well if the Hospital Board could be appointed by the Governor on nominations by the Medical Society of Virginia, just as are the members of the Virginia Medical Examining Board. No one is so good a judge of medical professional fitness as is the State Medical Society; and besides, such a course would remove the selection of medical men from the circle of purely political bias. Surely Virginia has suffered enough in recent years without adding another *medical* institution to the list of those to be governed solely by the caprices of a political partizan Governor, should one succeed our present worthy one,

South West Virginia Lunatic Asylum.

This State Asylum or Hospital for the insane, has just been built at Marion, Smyth county, Va., and was formally placed under a good Board of Visitors on March 1st, 1887. The building is said to possess the modern improved features suited to the purposes for which it has been erected; and the grounds are ample and susceptible of any desirable amount of improvement as to walks, gardens, shade trees, lawns, etc. It will accommodate about 300 patients, according to the present arrangements, but after awhile additions can be made which will make it capable of accommodating half as many more. A great number of applicants for admittance have already been made by the friends of the afflicted; and for some time past a number of insane have been kept in jails for want of better accommodations until this Asylum could be got in readiness.

The Board of Visitors, at its meeting, March 1st and 2d, elected the following medical officers: Dr. Harvey Black, of Blacksburg, Va., Medical Superintendent; Dr. Robert J. Preston, of Abingdon, Va., First Assistant Physician; and Dr. John S. Apperson, of Town-House, Va., Second Assistant Physician. A better team than this can no where be found to take charge of an Asylum. Each of the three physicians is well known to the profession at large; and had the selection been left to the Medical Society of Virginia—which voices the opinion of the doctors of this State—exactly these three would, we believe, have been unanimously chosen. Dr. Black will be remembered as the Superintendent of the Eastern (Va.) Lunatic Asylum some years ago, until the corruption of politics influenced the party then in power to disturb even the happy management of the lunatic asylums of this State. Such disgraces we hope never to have to witness again—whatever may be possible complexions of changing political views. Dr. Black is again the right man in the right place. He possesses the rare combination of fitness for just such a position as he now holds, and enjoys the confidence and affection of the profession as well as the laity. What is said of Dr. Black applies as well to the two well established physicians who have been made Assistants. With such a medical staff, the profession will point with pride hereafter to the South-Western Lunatic Asylum.

Personal Notes.

✓ *Dr. Hunter McGuire*, of Richmond, Va., is to deliver the Annual Address before the Alumni Association of Jefferson ✓

Medical College, of Philadelphia, April 4th, 1887. His subject will be "Progress and Development of Medical Science." He is also to deliver in Washington, D. C., during May, an address as President of the American Surgical Association—subject not yet announced.

* *Dr. Joseph Taber Johnson*, of Washington, was elected President of the Medical Society of the District of Columbia during its late annual session.

Dr. B. A. Watson, of Jersey City, N. J., who was persecuted last year by the Society for the Prevention of Cruelty to Animals, because of some experiments on dogs, we are glad to learn is again from under the hand of the law. The criminal suit was terminated by the failure of the Grand Jury to find an indictment against the Doctor and his Assistants. In the civil suit before a Justice of the Peace, he was fined \$25. The Doctor appealed and non-suited the plaintiff, which non-suit was ordered and duly entered in the Court of Common Pleas. We trust this Society for the Prevention of Cruelty will act sensibly in the future, and not attempt to interfere with any scientifically proper experimentation on dogs, cats and the like. Dr. Watson, in his experiments, was engaged in a humane act, and should have been encouraged to go ahead rather than caused to suffer by so picayune a sentiment as led to his arrest. We wish the Doctor would go on now, and let us have the result of his observations.

Dr. May's Quiz-Classes.

On and after April 1, 1887, *Dr May's Quiz-Classes*, preparatory for U. S. Army, Navy and Marine Hospital, General Hospital and Civil Service Medical Examinations, will be conducted conjointly by himself and by *Dr. Charles F. Mason, Asst. Surg. U. S. Army*. This addition has become desirable owing to the great success of the classes, as evidenced by a membership in all classes of over one hundred men during the last three years, with less than five per cent. of failures. The classes will be conducted as heretofore, and the course of instruction will be made still more advantageous by additional facilities, such as practical instruction and attention to general educational branches. Quizzing by mail. For particulars, address Dr. C. H. May, 202 East 58th street, New York, N. Y.

The above notice is of special advantage just now to young graduates from the various medical colleges throughout the United States.

Health of Dr. Keith.

We take pleasure in publishing the following letter from Dr. Skene Keith, of Edinburgh, which will be gratifying news to all of our readers:

Dear Sir:—In your journal of December, 1886, Dr. Joseph Taber Johnson makes a statement concerning the health of my father, Dr. Keith, of Edinburg, which must have caused anxiety to our many friends in America. I shall be much obliged if you will state in your next issue that Dr. Keith is better and stronger than he has been for many years, and that he comes of a long-lived family—my grandfather dying at 89, my great-grandfather at 86, and my great-great-grandfather making a good recovery after lithotomy when considerably over 80 years of age. It is not unlikely that my father may outlive all the other operators mentioned by Dr. Johnson. I am, etc.,

SKENE KEITH.

The Engraving and Biographical Sketch of Dr. Milton Josiah Roberts,

Which is to appear in our April issue, will be a continuation of a plan begun years ago of presenting eminent medical men to our readers. Dr. Roberts has of recent years done so much to make the calling of the surgeon easier that many are anxious to know what they can learn of his personal appearance and personal history. Our gallery heretofore has been decorated with none but eminent physicians and surgeons. Beginning in 1876 with the engraving and sketch of the immortal Dr. J. Marion Sims, we have since presented, at irregular intervals, engravings and sketches of Dr. Crawford W. Long, the discoverer of modern surgical anæsthesia; Horace Wells, Drs. Lewis A. Sayre, Henry F. Campbell, Robert Battey, Hunter McGuire, Julian J. Chisolm, George Reuling, and J. Leonard Corning. This feature of our journal has made it many friends. We propose from time to time, in like manner, to publish other of our eminent subscribers.

With the Close of Annual Volume XIII,

It is natural to retrospect and prospect. We believe we are becoming one of the oldest continuous editors of the same regular medical journal in America. We founded the *Virginia Medical Monthly* thirteen years ago, as a journalistic venture, and much beyond any reasonable expectation at the time, it developed rapidly into a prominent journal of the country. There are now but few sections of the United

States where it is not known, and in many places out of its native State it is popular. Its success has been great enough to warrant some improvements, beginning with the *fourteenth annual volume*, April No., 1887. We desire to make it more conspicuously a journal for the reading doctor, and we will especially try to make it practical in the character of its contents.

Messrs. Polk Miller & Co.

Enter our advertising department this month with some pharmaceutical preparations which are fast becoming popular with the practitioners in this city, and will prove of great benefit to country practitioners as well. The day has come when the country doctor has practically to lay aside his tile and spatula, and dispense especially his pills in the much nicer and more palatable forms, as prepared for him by the manufacturing pharmacist. To all in search of such articles as Polk Miller & Co. advertise in this issue, we would commend this firm.

Dr. W. L. Baylor,

Of Petersburg, Va., is about to remove to Richmond, to open a pharmacy, etc., in the west end of the city. He comes to our city well recommended, and has long been a good practitioner in Petersburg. He is an old member of the Medical Society of Virginia. Of course he gives up the practice of medicine in entering upon his new calling.

The Mississippi Valley Medical Association.

The next session of this Association, which is second in importance only to the American Medical Association, will be held at Crab Orchard Springs, Ky., July 13th, 14th and 15th, 1887. The Committee having the success of this meeting in charge is very active, and this added to the size and influence of the Association itself makes success assured.

The Lambert Pharmacal Company

Has sent us a pamphlet of royal quarto size, detailing at some length the uses and mode of application of "Listerine." This preparation has won its way into every medical community in this country, and still it grows in favor, until now, it must be a "second-rate shop" indeed, that does not keep "Listerine" in stock. We have never heard of a physician who once used it that is not willing to use it again for all the purposes for which it is recommended, and these are numerous.

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(APRIL, 1886—MARCH, 1887, inclusive.)

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